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Tamil Arasu

Vol. VI July, 1975 Issue 1

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ROUTINELY RADICAL TAMIL NADU

HOUSING THE NEGLECTED SECTIONS OF SOCIETY

House-site pattas to Agricultural Workers.	Harijan Housing	Fishermen Housing
In 20 years from 1947-67 63,170. In 8 years from 1967-75 5,00,000. **Note :**— Recently village artisans have been included for benefiting from this scheme.	House-sites only were provided till March 1975, Such allotments came to 1,51,277. Since February 1974. It has been decided to build houses for Harijan Families in these sites. Already 14,069 houses have been constructed. Before 1975 over 30,000 houses would be completed.	During the year 1975-76 a provision of Rs. 2 crores has been made to build 5,000 houses for fishermen in coastal villages. These houses will be ready by Feb. 1976.

In Slum Re-housing the State has a proud record of having completed 20,000 tenements at a cost of Rs. 17 crores. Since inception in 1971, the Tamil Nadu Slum Clearance Board has sanctioned construction of 33,807 tenements at a cost of Rs. 28·68 crores.

DROUGHT Expenditure has Created Fixed Assets

Governor's Praise At Collectors' Conference

Inaugural address by Thiru K.K. Shah, Governor of Tamil Nadu at the Joint Conference of District Collectors and Police Officers held at Rajaji Hall on 5th July, 1975.

We are passing through difficult times. The Government of India had to proclaim Emergency recently. It has thrown additional responsibilities on the administration in the State in maintaining law and order. Local conditions differ from State to State and from place to place in the same State. But we have to keep the overall picture in the country in mind. I have no doubt that the Government and the people of Tamil Nadu will set an example to the rest of the country in nipping fissiparous tendencies in the bud, in strengthening national unity and in accelerating the pace of economic development of the country as a whole.

As you are aware, out of the 17,069 villages, 11,982 villages have been declared as drought affected and labour intensive relief works have been undertaken. I am glad, you appreciate that these relief works must create permanent assets for the community like improvement of minor and major irrigation tanks, laying of roads, soil conservation, etc. In case of roads, some of the Collectors have wisely taken advantage of Plan allocations and made them permanent assets. Upto the 14th June 1975, a total sum of Rs. 1,550.03 lakhs has been spent out of the total allocation of Rs. 2,056 lakhs for 1974-75 and 1975-76. Besides, a sum of Rs. 999.34 lakhs was spent out of the normal Plan funds during 1974-75. It is very necessary that the Collectors should keep the Government informed in precise details the impact of the drought relief measures already undertaken and discuss the further programme.

This year's severe drought has created special problems for panchayats and development works. The suspension of collectilon of local cess and local cess surcharge during the second half of 1974-75 and first half of 1975-76 has created financial difficulties for panchayats and panchayat unions. The panchayats are faced with heavy arrears of electricity charges payable to the Electricity Board. I would urge upon the Collectors to discuss these problems and suggest ways and means in solving them.

I am very happy that this year there is no dearth of fertilisers and that adequate quantities have already been supplied to the districts. Arrangements for the timely supply of pesticides to ryots for the next agricultural season have also been made. I am equally happy that the projects undertaken by the Small Farmers Development Agency in Madurai, South Arcot and Tirunelveli districts and the Marginal Farmers' and Agricultural Labourers' Development Agency in North Arcot and Salem districts with financial assistance from the Government of India and Co-operative institutions have benefited small and marginal farmers. A discussion of the subject for taking maximum advantage of the scheme which is on the agenda will be very helpful.

In spite of heavy loss of revenue, complete Prohibition was adopted by the State Government as a socio-economic measure for improving the economy of the lower strata of our society. It is not only in accordance with the Directive Principles of our Constitution but it mirrors Gandhian ideals which, I know, are so dear to the people of Tamil Nadu. Therefore, it is necessary that the Collectors and Police Officers jointly plan tightening of enforcement machinery. The **people in the taluk of Orathanadu in Thanjavur district have set a very fine example which can be a source of inspiration to the rest. The people there have formed Prohibition Committes without distinction of caste, community or political affiliation. Able-bodied young people and ex-convicts of prohibition offences are also helping in making prohibition a success. This village committee detects illicit distillation, watches activities of suspects and does educative propaganda. The example of this voluntary village committee is worthy of emulation. It is bound to be a pace-setter for Gandhian way of people's participation in welfare schemes. The whole of India is watching the success of the scheme with bated breath.**

Whole of India watching the Orathanadu Scheme for tackling prohibition Offences

Scheme After Scheme on C. M. Birthdays Help Vulnerable Sections of Society

The Government of Tamil Nadu under the dynamic leadership of our able Chief Minister Dr. Kalaignar Karunanidhi has been taking up one scheme after another to help the weaker sections of society. Whenever our Chief Minister celebrates his birthday, he makes it a point to inaugurate a new welfare scheme to utilise the funds received on the occasion. The idea of celebrating birthdays for a social cause—in sharp contrast to the satisfaction of one's ego on such occasions—is welcome and priaseworthy. Your whole being then gets permeated with anxiety to serve tl e masses and radiates it in all your actions.

Various welfare measures thus initiated from year to year by the Government of Tamil Nadu for the benefit of the most vulnerable sections of society have won appreciation all over the country. We have so far undertaken schemes for the rehabilitation of leprosy affected beggars, eye camps to fight blindness, replacement of hand-drawn rickshaws by cycle-rickshaws and rehabilitation of the physically handicapped. A new scheme for taking care of destitute widows and orphans is being undertaken this year. While discussing the details of running "Karunai Illam" (Orphanages), Collectors, I have no doubt, will give priority to the overriding necessity of rehabilitation.

At previous conferences, I have expressed my admiration for the "Manu Neethi Thittam." I have also emphasised how this mass contact programme is an ideal system of redress of grievances as decisions are taken on the spot and unnecessary delay is avoided. I find that you are discussing the subject at this conference. If there is any sign of this good system becoming mechanical or routine in character, you will appreciate that its object will be defeated. **The Chief Secretary, I find, has given you instructions to reinvigorate the programme and to take timely follow-up action. For example, pattas have been granted for lands allotted for cultivation and house sites to the poor. When such a major benefit has been conferred on the common man, I hope, you will take follow-up action which is of a routine character and thereby avoid unnecessary hardship. I do hope that you will add dynamism to the concept of "Manu Neethi Thittam" and make it a live instrument of socio-economic welfare of a vast mass of our population.**

EXHORTATION TO MAKE MANU NEEDHI THITTAM AN INSTRUMENT OF SOCIO—ECONOMIC WELFARE

The proposal of setting up inspection cells at district levels, which you will discuss, is of vital importance. The whole question should be discussed thread-bare in details. The closer supervision of services at lower level has assumed tremendous significance. They are immediately in touch with the masses. Their efficiency and anxiety to be helpful must be promoted. There is a danger of duplication of work. But your experience can secure maximum benefit of the concept being efficiently executed without duplicating or delaying work.

Tamil Nadu can take legitimate pride in the fact that considerable progress has been registered in the allotment of house sites to Harijans. It is a matter for gratification that from 1949 upto 31st March 1975, 2,35,949 house sites measuring 15,331.24 acres of land have been acquired for the purpose. The Tamil Nadu Harijan Housing and Development Corporation that was set up in February 1974 has begun well. It has an immediate target of construction of one lakh houses. I do hope the Collectors will help the Government in reaching the target so that a large number of Harijan families in all the districts may benefit. Provision of houses for fishermen in the coastal villages will, I hope, be followed up with equal vigour.

Since the last conference was held, the officers and men of the Tamil Nadu Police have discharged their duties satisfactorily and maintained law and order. No doubt there are stray incidents here and there. But, by and large, the people of Tamil Nadu have demonstrated their maturity and wisdom. I find you will discuss some points arising out of the implementation of the new Criminal Procedure Code. You have already brought to the notice of the Government some of these problems. A fair and full discussion at this Conference will be very helpful in solving them.

Ensure Vigilance and Vigour in the Execution of Socialistic Social Welfare Schemes

Presidential address by Dr. M. Karunanidhi, Chief Minister of Tamil Nadu, at the Joint Conference of District Collectors and Police Officers held at Rajaji Hall on 5th July, 1975.

I have no doubt that the deliberations and the discussions of this Conference of District Collectors and Police Officers will contribute substantially in arriving at decisions concerning the progress and welfare of Tamil Nadu as it did last year. In our Government, generally officers have risen to the occasion and extended their fullest co-operation untiredly. I take this opportunity to thank you all and place on record my appreciation.

People Stand with us

Taking up the nature's fury as a challenge and with a firm determination to convert the misfortunes into good fortunes, we have successfully tackled the adverse drought situation. Despite the nature's vagaries, drought and flood occurring alternatively during the past 4 or 5 years, it is the prompt decision of our Government, added with untiring efforts of the officers and unstinted support of the people of Tamil Nadu, which has helped our march towards the progress unimpeded. As our revolutionary Poet Bharathidasan aptly has put it,

" there are hurdles enough to
daunt us,
but we have broad shoulders enough
to survive and surpass."

As our beloved Anna cheered us with the dictum,

" We have an unflinching heart to
bear anything."

Only in the light of the above observations, our Government have been implementing all the progressive measures amidst tribulations—this is possible because vast majority of our people with their kindness, clarity of purpose and courage stand always with us.

As I am always pointing out to you, I am moving always with you all more in a fraternal than an official way as the Chief Minister of this State. I have full confidence in the officers of both administrative and Police that they will continue to discharge their full responsibilities towards our efforts to attain, by stages, a socialistic society and maintain public peace and tranquility by preventing lawlessness.

The political stand of the ruling party in Tamil Nadu and its ideals and objectives in view of the recent developments in the Indian political scene is wellknown. I have reaffirmed that it has always been the policy of the ruling party even before assuming responsibility of governing the State and even after assuming the power that the law and order of the State should under no condition be infringed. Violence, in any **form, should never be allowed in democracy. Whether the spark flies towards cotton or the cotton towards the spark, the damage is only to the cotton ; likewise the association with violence or violent method, whichever form it is, the affected party will always be the society as a whole. I would like to emphasise this point that in discharging your duties with responsibility you must bear this aspect in your mind.**

With the powers vested in the State and also the limited finances now assigned to the State's orbit we have been recording innumerable achievements. We have provided electricity, practically for all the villages in Tamil Nadu though due to some insurmountable difficulties only about a thousand of hamlets are yet to be brought under electrification.

The rural works such as formation of roads, linking small villages and laying of pathway to cremation grounds are under vigorous execution. Apart from bringing about 50 lakh acres of land under irrigation during the last 8 years, irrigation tanks, ponds and lakes are being repaired.

Many villages are today enjoying the full benefits of protected watersupply. Progressive schemes like conferment of ownership of house-sites and assignment of house-sites for agricultural labourers and lands for landless, have been implemented in a big way. With the strict enforcement of land ceiling Act, surplus lands have been distributed among the thousands of landless poor.

Houses have been constructed at a cost of Rs. 4,000 each and are allotted to harijans free of cost. About 30,000 such houses are to be constructed before the end of October of this year. Similarly, a scheme involving construction of 5,000 such houses for the fishermen community on the coastal area has already been commenced its operation.

Leprous Beggars, Rehabilitation Homes, Eye Camps, "Karunai Illam" (Home for destitute children)l Rehabilitation of widows. Family Welfare Benefit Scheme for Government servants and a number of other schemes along with the Family Planning Scheme, which is the basis for the successful implementation for all the above welfare schemes, should be pursued relentlessly by the District Collectors with the co-operation of several departmental officers in the district and higher officials of the Government.

More Attention to Civic Administration

I would like to point out that with the postponement of civic elections, the responsibilities of officer-have increased greatly and they should bestow their full attention on civic administration.

In my presidential address to you last year, hinting at the reintroduction of prohibition I had cautioned you about the known evils that would raise their heads. I also called upon you to prevent the emergence of anti-social elements such as illicit distillers, drunkards and their supporters and connivers. I reiterate to you the need for increased vigilance on your part and to ensure that the enforcing agencies themselves do not violate the law.

The decision of the Government to restrict the issue of permits for possession and sale of spirit and not to grant fresh permits and also not to entertain requests from existing licences for increased quantities of spirit licences have helped to a greater extent to contain the evils of illicit distillation. The spirit permit-holders are being kept under constant watch and scrutiny to prevent misuse.

In the present food scarcity conditions, I would expect the officers to be vigilant to ensure that no irregularities creep in the supply of essential commodities through the public distribution system for the reasonable prices which we have already set up from our own procurement and the periodical allotments from the Centre.

Why not nationalisation of urban land to help the poor with houses ?

Dr. M. Karunanidhi, the Chief Minister of Tamil Nadu, while inaugurating the Seminar on Slums and Slum Clearance at Madras, urged for a rationasation of land policy to bring down the cost of the building and spokeas follows :

It is with a sense of " social justice " having the object of ensuring " social security " the Government of Tamil Nadu has undertaken the noble task of clearance of slums in the City of Madras on a time-bound programme. Therefore I am proud to note that the Slum Clerance Board in Tamil Nadu is organising for the first time an " All India Seminar " on Slums and Slum Clearance at Madras.

How slums come into picture

Slums are the result of fast but unplanned growth of urban areas. With the rapid pace of industrial development the demand for skilled and unskilled labour is so great that there is a continuous migration from rural to urban areas. Added to this, there is an army of job seekers, who, because of the rural unemployment move towards urban areas hoping to get jobs in some industry or other. Those who succeed in getting employment have to stay in the City and those who do not succeed immediately have also to continue to stay in City in search of employment. Therefore the Slums have become Permanent features in the City with these persons who are employed both in the organised sector as well as in the unorganised sector as unskilled labour. While society derives full benefit of economic development that go side by side with urban growth we must admit that enough investment had not been made so far in this country for providing decent living accommodation with minimum conditions of environment and sanitation in the urban areas to these new migrants.

Policy adaptable to the growing needs of the slum dwellers

We are now trying to form a National organisation policy considering the problems of urban areas of our country to act as a future guide in economic and social development of the country. The urban population of India has grown considerably in recent decades. It has increased from 34 millions in 1931 to 110 millions in 1971—three times in 40 years. Now it is estimated by 2000 A.D. the urban population might well be in the order of 300 millions. This increase in urban population creates problems of health, accommodation, education, water supply etc. Since major percentage of urban population subsist below **the poverty line**, there is a need to lay down **National minimum Needs Programme** for the urban poor in order to improve their housing, health, education and water supply etc. This cannot be done in an unorganised way. The approach should be one of **integrated development.** The slum dwellers are perhaps the poorest among the urban poor.

If you look at it merely from the economic point of view investment in slum clearance and housing the slum dwellers in buildings newly erected may not be a remunerative investment. But it has to be looked at, from the point of view of our social responsibility to a class of people, whose services are indispensable for the society's up-keep and also economic development. The responsibility is not only that of the Government, but also of the various sectors which are responsible for creating the conditions which make it necessary for the migration to urban areas. Particularly, the industrialists who start new industries and other existing industrial concerns who utilise man power in urban areas, should be aware of the need for providing suitable housing accommodation to their employees.

I request the Government of India to be realistic with regard to the needs of the slum dwellers and give an early decision as a national policy to meet this challenge of of eradicating slums in the country. Unless this is done mere encomiums by the leaders—who come see and go—the slum clearance scheme of Tamil Nadu will bear no result to find a solution for this problem in the long run.

Rationalisation of land Policy

This All India Seminar on Slums should deliberate on certain clear national policy on slums and slum clearance to be adopted in all metropolitan cities and towns with modification to suit regional conditions and give top priority to such schemes which are beneficial to the urban poor. The important steps to be taken to arrest further growth

of slums by the inflow of population through the development of Satelite towns in the neighbourhoods of the City, with the opportunities of employment will have to be discussed in this seminar. Above all the involvement of the people and also the private sector in all such schemes may be analysed in greater detail so that the burden of Govt. may be shared by others which will benefit more number of urban poor **in a limited time.** The cost of land required for all urban development programme including slum clearance is unrealistically high which is beyond the repaying capacity of the urban poor.

N.B.O. Estimation of houseless poor :

The Fifth Five Year Plan document concedes that '**the available data as regards the shortage of housing in urban and rural sectors is unreliable and unsatisfactory.**' However based on an assessment made by the National Buildings Organisation in 1961, and projections for the subsequent periods, the current housing shortage in urban areas in our country is estimated to be in the order of 31 lakhs. Another 31 lakhs of houses are below standard and cannot be considered to be fit. The highest incidence of shortage of urban housing is in the low income categories.

The Government of India has no doubt conceded the need for the improvement of slum ares and clearance of the slums. But no separate allocation has, however, been made for clearance of slums by providing new housing stock. What had been done was to provide a small sum for environmental improvement in slum areas. The Government of Tamil Nadu has always felt that spending money on mere improvements to the slums does not go far enough and therefore decided that the only remedy is to

Living standards of the poor should be improved by increasing their wages

clear the slums outright. It is only based on this policy, the Slum Clearance Board was established with the objective of eradicating slums in Madras City as a first step.

I am very proud to say that Tamil Nadu is the first State to establish a Slum Clearance Board for this purpose and achieving a tangible result in this direction.

Inability of HUDCO

Our Government had approached the Housing and Urban Development Corporation (HUDCO) of the Government of India for loans for slum clearance programme. The HUDCO has now imposed a ceiling on the cost of construction of tenements for the slum dwellers who belong to the economically weaker sections. The ceiling of Rs. 8,000 fixed is not realistic for construction in a place like Madras City where the land cost and the cost of construction are very high. It has been represented to HUDCO and the Government of India that this ceiling should not be made applicable to slum clearance construction in Madras City and we are yet to get a final decision of the Government of India on our representation.

Pride of Tamil Nadu Government :

Even though the Government of India introduced 'Environmental Improvement Scheme' in the year 1972, to provide basic amenities for slums which may not be taken up for immediate clearance, this scheme was withdrawn by them in the year 1974. But the Slum Clearance Board has constructed about 16,000 tenements so far and cleared the most conjested slums in the City of Madras. The Government of Tamil Nadu has provided an allocation of Rs. 3.50 crores every year since the formation of the Slum Clearance Board and Government of India have not made any separate allocation for this purpose.

This Seminar will make note not only on the cost of acquisition which is very high but also on the mode of acquisition of lands and the manner of payment as compensation etc. Unless a rationalisation of land policy is taken up with the utmost urgency in order to guarantee the constant supply of land available with Government for development at reasonable prices, our efforts may not bear fruit. I, therefore, request you to deliberate first on an All India policy on rationalisation of land use in urban areas.

Read

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Says Delhi Official

It is heartening to note that the Government of Tamil Nadu has prepared a classical report in regard to the slum clearance and improvement schemes which is commendable. In further, the scheme is a first time achievement of city planning and is loudly advocated by the Tamil Nadu Government ; the new tenement for the slum dwellers so far made in the metropolitan cities of India. The area of each tenement prepared under the Slum Clearance Scheme has its provision for Madras City is within an area of about 200 square feet, with a living cum bedroom, a small kitchen and a bathroom.

Slums in India :

In a lucid article Jagmohan, " Our Cancerous Slums ", *Link*, January 26, 1974 has rightly observed that according to the official figures, there are 11 lakhs people living in the bustee and pavements of Calcutta. Bombay has 300 slums, with about a million population, and another 2.5 lakhs live in open or extremely inadequate or impoverished shelters. Madras has 1,202 slums with a population of 9 lakhs, and the Delhi Master Plan places the number of slum dwellers in the city at 7 lakhs. The position is no less worse in Bangalore, the city of gardens where one lakh of its population live in 112 slums.

Tamil Nadu Government Achievements :

It is interesting to note that the Slum Clearance Board of Madras City has been involved for the systematic order of planning for the low cost housing scheme for the masses. The Board has set up a planning and investigation cell, which conducts the preliminary surveys, so as to examine the areas which are declared as slums. However, the detailed socio-economic data about the slums had been obtained by the enumerators and accordingly the suitable plans are drawn after the feasibility studies are conducted for building the new tenements for the slum dwellers. This line of action is commendable.

Low cost housing scheme :

As such, the Tamil Nadu Government has rightly adopted the policy for building the new tenements for the slum dwellers as a vital programme of low cost housing scheme. It is worthwhile to appreciate the fact that the Tamil Nadu Government has correctly adopted the action-oriented scheme for building the " tenements on the same land on which the slums are located, because the people living there are firmly opposed to their transplanted and rehoused in areas remote from their original places. Temporary transit camps are provided for the displaced slum dwellers while multistoreyed tenements with modern amenities are being built on the spot of the old slums. In addition to whatever Government land may be available the Slum Clearance Board is acquiring private land for building tenements."

Legal Provisions and Slum Clearance Board :

It is worthwhile to note that in the city of Madras " an autonomous body with a non-official Chairman called the Slum Clearance Board has been constituted. The Slum Clearance Act gives its wide powers to declare an area unfit for human habitation and to prevent the growth of new slums."

By
THIRU. GOPAL BHARGAVA
Town and Country
Planning Organisation,
New Delhi.

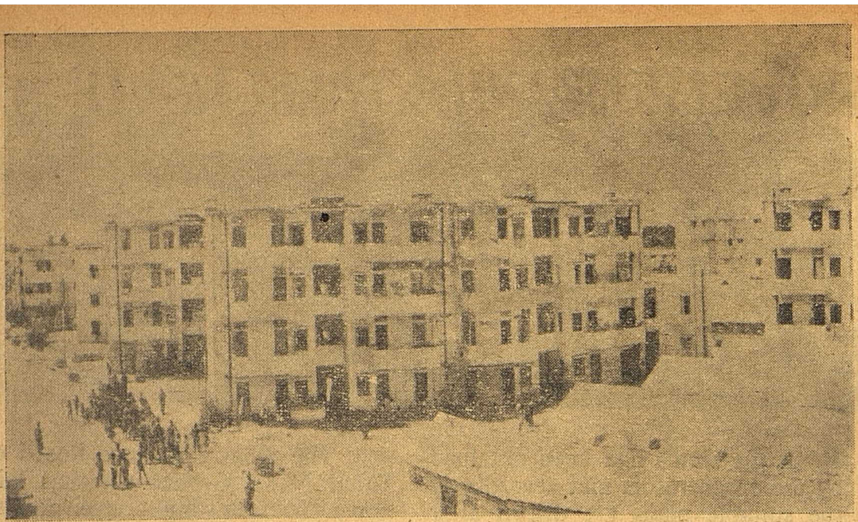
The Slum Clearance Board of Tamil Nadu Government has laid down the following objectives and have been directed for the protection of the slum dwellers during any eviction order, namely, that the (*i*) Slum Clearance Board has undertaken the provisions for the slum dwellers — an alternative temporary accommodation until the tenements are constituted for them. (*ii*) By the authority a special case has been taken to guard against the creation of new slums. (*iii*) Platform dwellers are confronted to many inconveniences and hardship and also to accidents due to encroachment of motor vehicles. For this the Government of Tamil Nadu has rehabilitated through a scheme by providing a temporary shift site in some other parts of the city areas. (*iv*) Proper site has been earmarked and well layout tenements have been constructed for the slum dwellers in the rehabilitation scheme. (*v*) The Slum Clearance Board makes all possible arrangements for the provision of public utility services like drinking water supply, electric lights in the slum areas.

Identification Procedure :

As such, all the necessary measures are being provided to shift the slum dwellers to a suitable site by taking photographs. After the proper scrutiny each unit of the family is provided with a well built-up tenement. Such is done to ensure that only the original tenants are housed in the newly built up tenements under the slum clearance scheme. The multi-storey construction has been provided for the slum dwellers. However, the proper attention is emphasised for educating the slum dwellers, so that they lead a hygienic way of life.

Cost Involvement :

It is worthwhile to pin-point that the rent charged in the newly built tenements for the slum dwellers



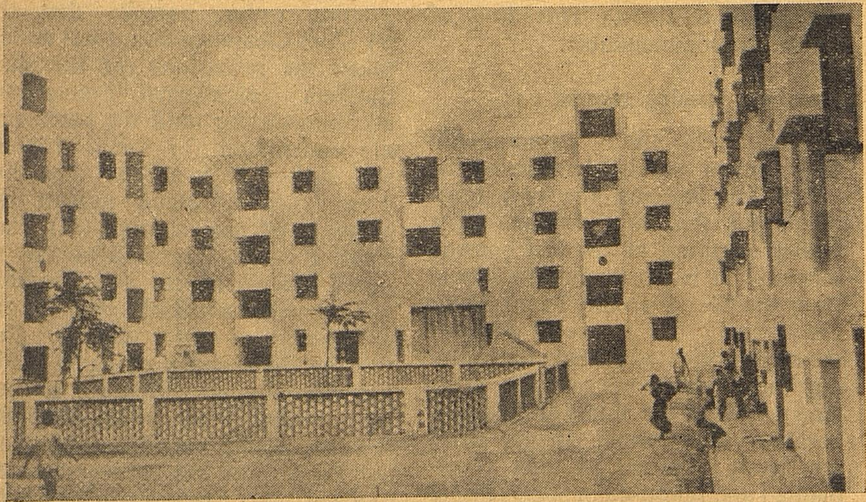


Photo Top : Venkatapuram, Saidapet Constituency-
348 tenements (Cost involved 38.74 lakhs)

Photo above : Kalaignar Karunanidhi Nagar Saidapet Constituency-
488 tenements (Cost involved 39.40 lakhs)

is only at a nominal amount. Such is indeed a commendable task of achievement particularly in the metropolitan city of Madras. However, the economic rent for each tenement works out to be Rs. 43 per month while only an amount of Rs. 15/- per month is collected from the slum dwellers.

The slum clearance plan of Tamil Nadu Government costing Rs. 28 crores is subsidised in respect to the slum clearance and improvement schemes. As such, the Government of Tamil Nadu is recurring a heavy expenditure as a subsidy on the low cost housing with an objective in view, so as to eradicate completely the slum conditions in the city of Madars. This is done by a line of action towards the large scale programme of the newly built tenements. Thus, the proper care has been taken up by the Government of Tamil Nadu to rehabilitate the slum dwellers. In this direction, all the possible care is being taken to provide the slum inhabitants to basic facilities, so that they are able to have a congenial living type of accommodation with the better provision of the environmental conditions. It is worthwhile to point out that in the Slum Clearance Scheme of Tamil Nadu Government the pavement dwellers and squatters are to be rehabilitated on the outskirts of the Madras City. The Tamil Nadu Government has decided to pay Rs. 50 each to help the unauthorised slum dwellers to help them build their own sheds. Such is the laudable experiment which will clear the city from the problem of squatters.

Planning Outlook :

It is yet to be seen whether the target set by the Tamil Nadu Government will be achieved. As such, the Tamil Nadu Government has so far constructed over 15,000 tenements. Another 15,000 target of tenements was set during the end of the Fourth Plan period at a cost involving Rs. 8 crores. However, while the target for 1971—72 was 6,837 tenements, only 1,981 were built in that year period. In total so far 15,181 tenements have been constructed at a cost of Rs. 582.42 lakhs. However, the target for 1972—73 was fixed at 6,000 tenements and the budget provision in this regard was Rs. 365 lakhs. During 1974—75 period a substantial effort has been directed by the Tamil Nadu Government to have a large scale scheme for the slum dwellers.

It is worthwhile to note that " if the Slum Clearance Board is to carry out its programme within a decade or so, it has not only to step up the rate of building tenements, but also to bring down the costs of construction significantly." Thus, the above point of observation should be given the due importance of recognition in the realm of research and administrative set up of machinery, so that the slum dwelling unit cost is lowered substantially.

According to an estimation, there are one thousand slums in the city of Madras containing a population of 7 lakhs, out of a total population of 25 lakhs. As such, the Tamil Nadu Slum Clearance Board has the formidable task of building 1.5 lakh tenements if all the slum dwellers are to be suitably housed.

Indian Cities Problems :

Mr. Om Mehta, Union Minister of State for Works and Housing, in a published article has recognised housing is an " important social welfare activity. In fact, shelter is one of the primary necessities of human existance. In metropolitan cities like Madras, Bombay, Delhi, Ahmedabad etc., where housing shortage is acute and a sizable section of urban population lives in slums, squatters colonies etc., and environmental conditions are poor." Thus, as a matter of urban policy until the modern housing facilities are provided, efforts should be emphasised to the slum dwellers that their living environmental conditions should be improved immediately.

HOW TO BUILD HOUSES FOR ALL?

House Building Industry Must be Helped with An Industrial Estate of its own

by
P. PURUSHOTHAMAN,
Professor of Civil Engineering, College of Engineering, Guindy, Madras-25.

The City of Madras has a population of nearly 25 lakhs of which nearly 20 per cent are not adequately housed. Assuming that five persons can be accommodated in a house of 50—60 sq. metres, the housing needs of this city can be predicted to be 1,00,000 houses. If this problem is to be solved in one year, the rate of construction should be 300 houses in a day. The expenses involved will be in the order of one crore of rupees per day at the current market price. Assuming eight working hours per day we shall have to turn out a **house in every one and a half minutes.**

Mass Production and Mechanisation

It is obvious that this challenge cannot be met through conventional building practice. Modern methods of mass production, extensive use of machinery, and introduction of skilled labour are required and the current building trade with loose controls must be transofrmed into a building industry with faster financial turnover.

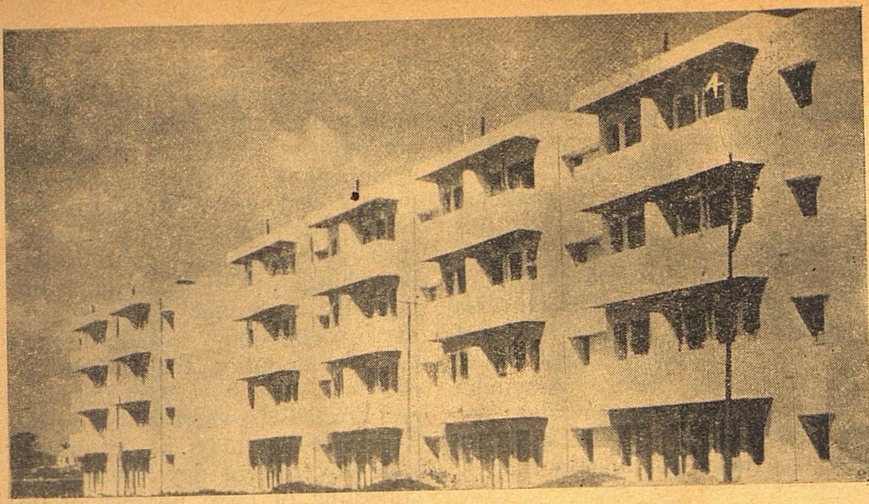
Standardisation and Prefabrication

In the traditional building industry the size of doors and windows and the bricks have become standardised. If mechanisation and mass production are aimed at, then dimensional discipline, modular coordination and standardisation of various building components become prerequisites so that large number of similar components can be mass produced at reduced costs. Besides standard size bricks and doors and windows, foundation blocks, columns, beams lintels, wall panels, floor panels, roofing units, stair case units are all to be prefabricated. Bulk storage, conveyer belts, concrete batching plants, concrete pumps, various kinds of vibrators, steel frameworks, automatic assembly and welding of reinforcement grids, integrated plumbing and electrical wiring, battery casting, steam curing, auto claving, prestressing etc. are required. Since the components will vary in weight from 100 Kg. to 10,000 kg., movement of products using heavy cranes are implied in this process of prefabrication and it is obvious that mostly skilled labour is involved. Heavy capital investment on factory buildings, machinery power and storage yards are implied. In addition these heavy components are to be transported to various building sites using heavy transports and erected in position with cranes of most sophisticated types. The site assembly of these various components using most modern techniques are highly specialised in nature once again involving skilled labour and more skilled supervision and perfect coordination between various trades such as plumbing, electrification, furnishing, insulation and landscaping. It is through a process of mass production, standardisation and mechanisation that prefabricated components have been produced and erected elsewhere in the world. This process may be contrasted with any present day building site consisting of large number of unskilled labourers, extensive site storage, a concreting platform, one concrete mixer, one concrete vibrator and wooden scaffolding etc.

Many questions arise at this stage. Are we in a position to make this essential transition form a building trade to building industry? Where is the finance available for this transition? Are the equipments available ? Who is to train the required skilled labour and foremen ? What is the position of unskilled labour who will become unemployed ? Where is the land available for this purpose ? At the present juncture the answers to most of these questions will turn out to be uniformly negative. Various methods have to be analysed to slove the problems. If the problem of the nation is to be solved, we must join hands and plan collectively and initiate a process of conversion of this highly unstable and risky building trade to an organised building industry which can withstand the changes in the political, social and economical climates with benefits to the builder and the nation. A feasible method of attack on this problem is outlined in the following paragraphs.

Development of an Industrial Estate for Building

We have in Tamil Nadu State, an Electronics Industrial Estate which is of a specialised nature when compared with those at Guindy and Ambattur. A similar Industrial Estate for Housing is proposed. The development of such an industrial estate needs a multi-disciplinary approach and must be viewed as a system involving political, economical, social and technological decisions. **Housing like agriculture needs a revolution and revolutions**



Basin Bridge bus stand scheme Basin Bridge Constituency 192 tenements
(Cost involved Rs. 16 lakhs)

generally bring in their wake (besides benefits) many unwanted socio—economic effects which must be foreseen and their ill—effects minimized. A revolution in the housing front signifies major changes in the existing setup, many innovative ideas, scientific advances, changes in basic concepts, education, training, extension service and considerable amount of discipline and order. This proposed revolution must be viewed in the same lines as a war which is thoroughly planned, beautifully executed and satisfactorily concluded in a minimal time period. Like all revolutions and wars this process is bound to be costly.

Needs Analysis

For a community living recreational, cultural, shopping, medical and educational facilities are essential for human settlement. A human settlement of more than 50,000 members increases transport requirements and the quality of life deteriorates in such colonies. Erecting thin concrete panels renders the housing hot and humid which drives away people from inside the house. High density living has neen resisted by people. Thus **we find that it is not only the basic need for houses that is important but the need shall be further qualified by socio-economic and cultural factors.** The houses for Madras city are to be planned by us here and now and not by the Americans or Russians or Germans who may be willing to give us their equipments on a turn key basis.

Unless there is continued demand, mass production results in increased dead-capital locked up in stored components which could not be moved out. In a socialistic country such as India it is only the Government which could ensure continued demand. The Government must then assure as in Russia, that prefabricated components shall get priority over conventional construction. In fact the supply of scarce materials such as cement, steel, bricks and wood should be made only to the prefabrication factories and private purchases of such commodities must be made expensive. Prefabricated buildings coming out from factories shall have the automatic approval of town planning and municipal authorities. Banks shall freely finance the loans for such buildings. Unless such macro decisions at Governmental and financial organisations are forthcoming, a revolution in building industry is impossible. In addition, Governments (both State and Central) should become partners in this endeavour by giving free land and much needed capital on a nominal interest (say 5%). In fact the much publicised socialism requires this kind or participation.

Feasibility Study

With the background presented about it is now possible to enumerate a feasible solution to the problem.

(1) The Government shall indicate the areas of the city which should develop as human settlements of not more than 50,000 population each in consultation with Town Planning and Metropolitan Development Authorities. This means each colony will consist of 10,000 houses. For Madras city 125 such colonies are to be earmarked by the year 2000A.D.

(2) The minimum requirements of space for an average family of five persons and such other things shall be published as minimum middle and high income groups.

(3) A set of standard plans shall be approved by a panel of architects, allowing enough variation so that the proposed housing colonies do not look like a collection of boxes as it has happened in East-European countries.

(4) A planning and research organisation consisting of experts in analysis, design, construction and production is to be set up by the Government to produce the most economical and feasible solutions to the various plans.

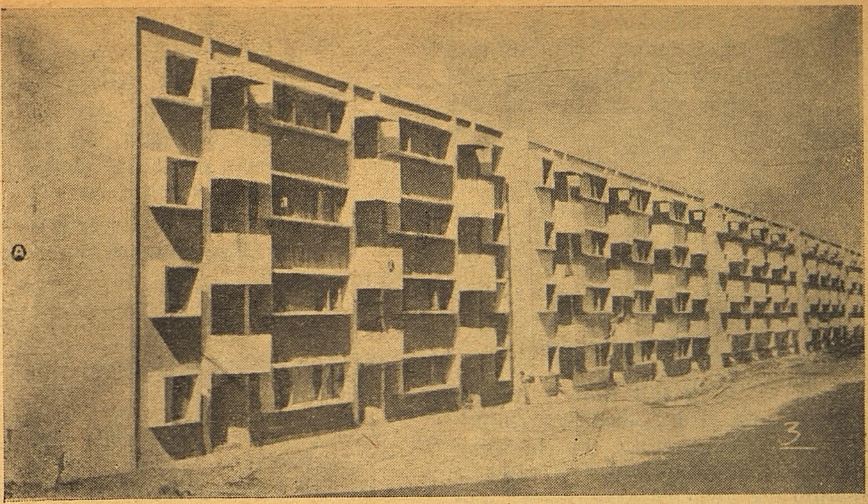
(5) Having identified the various components which are to be massproduced, availability of materials, men and money should be considered by a panel of experts from Government, industry and banking agencies. Adequate expansion of the concerned industries, proper man power training and collection of funds shall be undertaken at a war footing. Machinery that can be spared from various projects may be assembled in a central pool.

(6) A list of contractors, builders, consulting engineers, designers etc., from Government and Private agencies who will participate in this building revolution shall be prepared and tasks allocated to various groups, closely associated with their background, financial limitations and past experience.

(7) In each of the proposed building colonies an area of 0.5 km to 5 km may be reserved for site prefabrication of heavy components

so that expensive transport may be avoided and also for intermediate storage of items coming in from the proposed industrial estate for housing. Furthermore those items which are not fit for perpetual production in the industrial estate will be precast here. In addition erection and assembly crew with associated materials will be stationed in these areas.

(8) Such of those items which could be mass produced and sold not only in the building colonies of the Madras City, but also elsewhere in the country will be done by various units of the industrial estate. A list of such item is appended. In the proposed industrial estate the Government will stock steel, cement aggregates, lime, bricks, timber and such other materials in stock piles, yards, silos, etc. The Government will also stock machinery which are to be hired out. Furthermore it will purchase finished products and store them in yards and warehouses and release them to the various colonies on demand. The Government may also produce a few items with its own minimum labour force, if private agencies are unwilling to produce them because of insufficient demand, complications in casting or production or because the rates are not competitive. The Government will have its design and administration building in this estate and also training schools for artisans and supervisors. All buildings in this industrial estate will themselves be prefabricated. The Government wing will be surrounded by various manufacturing units which are rented by private enterpreneurs, say approximately sixty in number. These individual shops may be of 200, 400, 600, 800 or 1,000 sq. metres each satisfying the requirements of various manufacturing units. They may be of fully roofed, partly roofed or of the open yard type.



Gandhinagar—Purasawalkam Constituency 496 tenements (Cost involved 33 lakhs)

The private manufacturers will purchase scarce raw materials from the Government, manufacture finished products according to requirements given by the various housing authorities and supply them to the Government itself at specified rates agreed uopn in a contract. In addition they may supply to the free market if production exceeds the Governmental demand. The industrial estate may require an area of 1 kilo metre.

(9) Such a plan as above combines the advantages of private and public enterprises. First and foremost the supply of raw materials is controlled by the Government. The finished products are bought back by the Government and hence stability of price and continued demand are assured. Control of labour, quality of production, sustained motivation which are best controlled by the private sector, are earmarked for them. Heavy investment by the private sector is avoided, since only building rental and payment for labour and capital investment on a few hand tools and machinery are involved.

(10) The Public Works Department which is now stagnating without adequate work may be asked to handle this job with the construction, planning and design talents already available there. The SERC and College of Engineering, Guindy, may be tapped of their research potential and standardisation of designs. Thus no new department is to be created for this purpose which will be in direct conflict with the Housing Board and Slum Clearance Board. In effect these Boards are expected to be major customers for prefabricated products.

(11) The capital outlay for this industrial estate will be in the order of 5 crores of rupees, with the land provided free of cost and the revolving fund will be in the order of Rs. 10 crores for locked up storage at any time. The private sector may altogether invest about one crore of rupees. The return as net profit to the private sector is expected to be in the order of 15% if things are perfectly organised, which is a pre-requisite for projects on prefabrication. Conventional burreaucratic set up will end up in a loss to the Government. The employment potential for engineers, architects and management personnel will be in the order of 1,000, supervisory cadre will be about 3,000, skilled labour about 10,000 and semi skilled labour will be about 20,000.

(12) While improving quality of products, quick construction, and fast turnover of money about 30,000 un-

skilled labour will be thrown out of employment by this industrial estate. The consequences of this in the long run will be for the better of the country since unskilled labour leads to enormous wastage of national wealth. However unskilled labour can be easily trained to do skilled work that is appropriate for prefabrication industry.

It is long felt that a revolution is necessary in the building front converting the building trade to a building industry. In this revolution, the Government and the private enterprises shall be partners. The enormous housing needs of the Madras city are best satisfied by developing an Industrial Estate for Housing. Prefabrication and mass production are implied. Various agencies involved and their tasks have been identified. It now remains to bring into fruition this highly idealised plan. The necessary background for this development have already been introduced in conferences, Planning Commission documents and the NCST Panel Reports, by the author of this paper.

APPENDIX I

VARIOUS UNITS OF INDUSTRIAL ESTATE FOR HOUSING

1. General Steel Fabrication shop.
2. General Carpentry Section.
3. Brick Manufacturing Unit (Conventional, cored and Ytong bricks).
4. Aggregate Crushing Plant.
5. Lightweight aggregate manu facturing units.
6. Plants for manufacture of air on training agents, plasticizers, curing comounds, watersealants, demoulding compounds, latex, various grades of bitumen, polymerizing mastics etc.
7. Reinforcement fabrication plant, fully automated.
8. Concreting accessories manufacturing plant for wire products such as reinforcement spacers, anchor screws snap ties, lifting screws, inserts and hooks.
9. Mould fabrication plant using sheet metal.
10. Wire rope products such as lifting tackles and various types of pulley block arrangements.
11. Adjustable struts, suspended form work and scaffolding and erection stays.
12. Prefabricated brick masonry unit (Vibrated brickpanels).
13. Prefabricated doors and windows, sliding shutters and tilting doors.
14. Prefabricated foundation units.
15. Prefabricated lintels and beams.
16. Prefabricated columns.
17. Prefabricated cored floor panels and wall panels.
18. Prefabricated panel type floor panels and wall panels.
19. Prefabricated staircases.
20. Prefabricated bathrom cubicles.
21. Prefabricated lightweight concrete panels.
22. Prefabricated balcony stairs and hand rails.
23. Prefabricated sandwich panel units.
24. Prefabricated Trusses.
25. Pretensioning yard for mass production, inclusive of steam curing.
26. Unit for manufacture of battery moulds, tilting battery moulds, tilting moulds and sliding frame work.
27. Unit for lift slab construction and jacked up construction.
28. Unit for pretensioning with thermal prestressing.
29. Units for sophisticated exterior finishes.
30. Unit for assembly of integrated electrical circuits.
31. Unit for assembly of integrated plumbing.
32. Unit for manufacture of prefabricated crane gantry systems.
33. Unit for manufacture burnt clay products.
34. Unit for manufacture of light weight partitions.
35. Units for interior decoration, upholstry, flooring with mosaic etc.
36. Unit for sound insulation and acoustic baffles.
37. Unit for water proofing and weather proofing.
38. Labour force handling units for storage, handling and transportation of heavy prefabricates within the Industrial Estate.
39. Hiring unit for construction machinery and equipments.
40. Tubular scaffolding and Truss Unit.
41. Plant for production of box units of 25 tons weight.
42. Unit for fabrication of standardised furniture.
43. Prefabrication unit for manufactureof R.C. Shelves cupboards etc.
44. Unit for manufacture of various types of Trailers for transportation.
45. Unit for fabrication of gypsum fillers and panels.
46. Unit for testing and certification of prefabricated components.
47. Unit for manufacture of thermal insulation.
48. Unit for manufacture of trailor houses and mobile homes.
49. Plant for manufacture of "heart" units including kitchen and bath side by side with minimum plumbing.
50. Ferrocement manufacturing units.
51. Fibre reinforced concrete products unit.
52. Manufacture of fencing posts and prefabricated compound walls.
53. Unit for manufacture of door and window shutters and sunshades.
54. Unit for manufacture of prefabricated water tanks, dust bins, refuse chutes etc.
55. Unit for manufacture of nonstandard products such as shells, domes etc.
56. Unit for assembly of asbestos sheet products.
57. Unit for manufacture of joint sealing compounds.
58. Unit for manufacture of R.C. Grills.
59. Unit for manufacture of garden benches, flower pots, having slab sets.
60. Units for assembly of fire fighting equipments for fire protection.

HOW TO PROTECT THE SLUM DWELLERS FROM HEALTH HAZARDS

Presidential address of Thiru Rajaram, Minister for Labour and Housing, throws light on the subject as to how to improve the health and sanitary conditions of the slum dwellers.

No city in the world is free from the menace of the slums and the city of Madras has not been an exception. After the gaining of independence by India in 1947 and the progressive industrialisation and setting up of newer and newer factories, migration of rural labour in search of jobs started in right earnest. The 189 slums in the city in the year 1933 multiplied into 306 slums in 1953—54, to 548 slums in 1961 and to 1,202 slums in 1971 consisting of 1,63,804 families accommodating 7,37,531 persons, out of the total population of 2.47 million in the city. Thus every third man in the city is a slum dweller today.

Living conditions of the poor

In order to appreciate adequately the change that has to be brought about in the lives of a large number of slum dwellers it is necessary to have an idea of the living conditions that exist in slums. **Almost all the slums are made up of thatched huts insanitary beyond description, prone to leakage in rains and susceptible of catching fire in summer. Ordeal by fire in summer and by floods in winter, surrounded by the most unhygienic and insanitary conditions, this is how the slum dwellers live their tormented lives from birth to death. In any democratic society where such a large segment of society lives in the most abject surroundings and at the mercy of all the elements the Government cannot afford to neglect them and the Tamil Nadu Government became fully alive to the problem of tackling the slums as a live issue.** The Government are fully aware of the magnitude and immensity of the task undertaken. On the one hand was the task of rehabilitating a population of 1,63,804 families inhabited by 7,37,531 persons in suitable tenements the cost of which would reach upto a collossal figure of Rs. 164 crores or more. On the other side was the urgency imposed on the Government by electorate and the imperative need of the fire and flood victims calling for instant succour. It was in these circumstances Dr. Kalaignar Karunanidhi, the Hon'ble Chief Minister of Tamil Nadu has set up the Tamil Nadu Slum Clearance Board the first of its kind in the whole country and even across the Globe, with the specific task of clearing all the slums within the city of Madras.

Welfare Measures

Next to food and clothing, the greatest necessity for a human being is shelter, a place to rest in peace, free from the wounds inflicted by unkind society and nature. It is only in meeting this particular need, especially of the lowest and weakest section of the society, the Governments everywhere are slow. We can understand the reason. The construction of shelters suitable for this section of the society is a costly proposition. Too often in the complex competition for priorities with the available restricted finances, housing gets the last priority. However the Chief Minister had decided that as a social welfare measure, housing of the weekest section of society needed to be treated on an equal footing with other similar measures like Public Health, Free Education, etc., and sizeable funds were allotted to slum clearance work.

Steps are in progress in Tamil Nadu to improve the living conditions of the poor.

Initially the Government of India was trying to allot funds specifically for the slum clearance and improvement works and later it had transferred the subject under State sector. However it continued to give some assistance, however small it may be, for carrying out Environmental Improvements in slums. Even this assistance has been stopped now and this also has been included in the State subject. Thus we find the Centre has completely shifted the responsibility of this stupendous social problem on the shoulders of the State. It is for you now, to go into the question and decide if the State with its meagre finances can really tackle this problem effectively. Will it be possible to bridge this wide gap we now have between the stock and the need of housing that exists in slum areas in urban cities ? If the State and the Centre do not coordinate and concentrate on this great social problem the day may not be far off when neglected and frustrated slum population may create an explosive situation when things may go out of control resulting in civil disorder. It is therefore for you delegates, to go into the question and decide as to the need and quantum of responsibility to be shared by the Centre.

To stop migration is essential

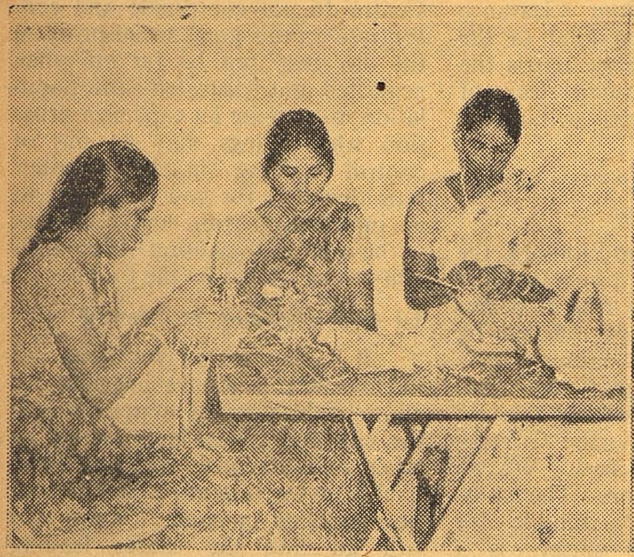
It is also left to you delegates to consider if clearance programmes alone could stop the migration into the city and if measures are to be taken simultaneously to check effectively further migration and formation of slums in cities. I know you will go into the causes leading to such formation. Perhaps you may consider if simultaneous implementation of Madras Metropolitan Development Authority activities in starting Urban nodes, satelite towns with comprehensive package with employment potential, industries and all amenities may to some extent curb the tendency of rural migration. Ways and means for such implementation will also be discussed in this seminar.

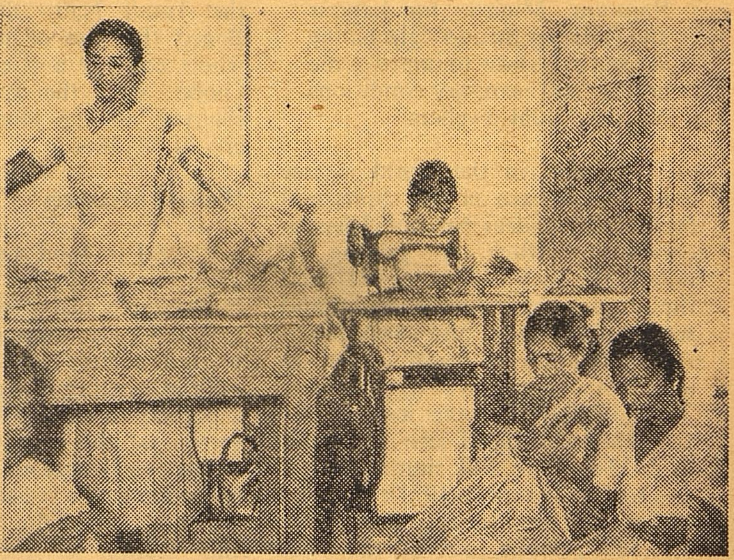
Reformation in the lives of slum dwellers

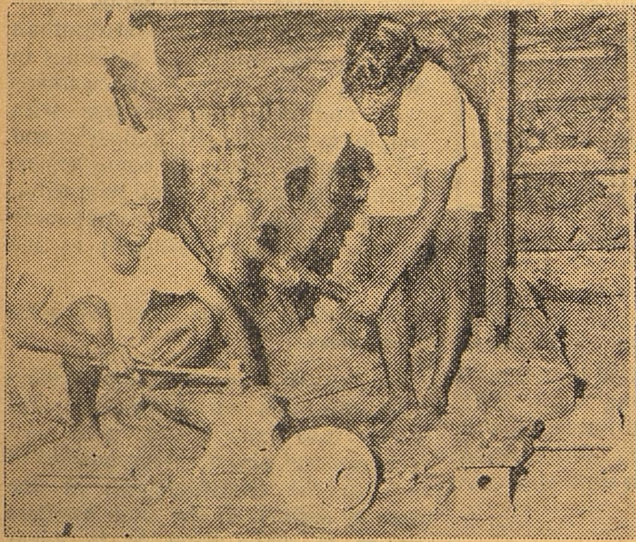
Rehabilitating the slum dwellers from the huts into permanent concrete tenements alone does not achieve our object. **Our goal is to see to the transformation of the mental outlook of the slum dwellers so as to make them fit to adapt themselves to the new environments and to move in the society as citizens of the country and bring up their children in an atmosphere fit to shoulder the responsibilities of the future nation in fulfilling the economic growth and social problems facing them.**

Whatever be the achievement of any organization or Government in trying to rehabilitate these slum dwellers and to give them necessary Social Education, it will not be the fulfilment of the objective of the Government if the economic conditions of the slum dwellers are not improved in these days of inflation. The need for income supplementation schemes to be started in the various slum areas to benefit the slum dwellers will occupy important place of the seminar.

SLUM BOARD'S INCOME SUPPLEMENTATION SCHEME







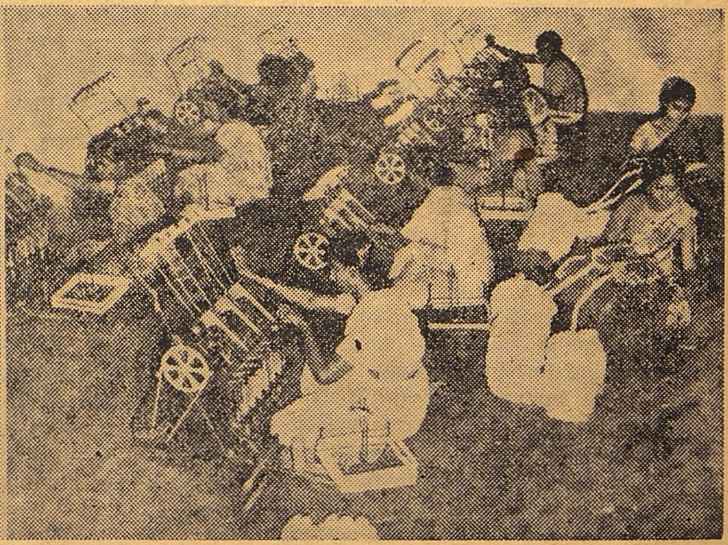


Photo above (LEFT)

It is the intention of the Board not only to rehabilitate slum dwellers in permanent modern tenements and give them social and health education but also to give them opportunities to earn and supplement their income so that their economic condition can be improved. Here is a group of women doing basket weaving which gives them additional remuneration to keep their families happily going.

Photo below (LEFT)

SMITHY WORKS

Group of slum dwellers who are good at smithy work and this perhaps gives income more than carpentry if properly handled. Assessing the scope of such smithy workers the Board proposes to start smithy centres in various slum areas.

Photo above (RIGHT)

The help of banks is also taken in improving the economic conditions of the slum dwellers. The State Bank has been very enthusiastic in this matter and it has recently offered soft loans for hire purchase of nearly 100 sewing machines on easy instalment basis. Here we see a group of ladies using the machines given to them for earning extra income to augment their financial resources.

Photo below (RIGHT)

It is a common saying that ladies waste their leisure time in the afternoon and evenings in fruitless chatting with each other. Such may not be said in the case of some of the estates of the Slum Clearance Board where they are very well organised schemes to engage the women folk of the areas in income earnings schemes. Here we see one such scheme operated by the Khadi Board where over 200 women are engaged in the rural textile centre which gives them an average income about Rs. 5 per day.

SIPCOT-PRIME MOVERS IN INDUSTRY

The Government of Tamil Nadu have been making concerted efforts to accelerate the pace of industrial growth and also simultaneously achieve the much-needed industrial dispersal in backward areas. To formulate and implement effective programmes to achieve this objective, the Government have been strengthening the necessary institutional frame work in the State. SIPCOT is one of such institutions. It was set up in 1971 by the State Government as a Public Limited Company fully owned by the Government with an authorised share capital of Rs. 5 crores. It is managed by a Board of Directors comprising senior officers of the Government and reputed industrialists of the State.

Objectives

The objectives of SIPCOT are the achievement of increased rate of growth of industries in general and facilitating industrial dispersal in the hitherto underdeveloped areas of the State. Within this overall objective, SIPCOT endeavours to provide comprehensive services to entrepreneurs by providing any assistance for which no other institution is specifically responsible for.

SIPCOT'S role is to plan, promote and develop medium and major industries and its promotional activities comprise the following :

1. Development of potential growth centres and provision of developed land at reasonable cost on easy payment terms ;
2. Implementation of a package of incentives for the benefit of new entrepreneurs ;
3. Provision of various ancillary services for the entrepreneurs and
4. Provision of balancing finance or supplemental finance on liberal terms to medium and major industries.

1. Development of Potential Growth Centres and Provision of Developed Land

SIPCOT has embarked upon an ambitious programme of developing potential growth centres. In order to achieve the objective of dispersal of industries in backward areas within the limited resources available, SIPCOT has selected the most appropriate strategy of developing selected centres in backward areas which offer potential for development. Besides providing all the infrastructural facilities required for industries, SIPCOT also ensures that the growth centres selected for development attain the stage of self sustaining growth in the shortest possible time.

As a first step in this direction, SIPCOT assisted the development of a private Industrial Complex at Anaikaraipatti in Ramanathapuram district where one major engineering unit, two medium units and eleven small scale units had commenced production in the year 1973 involving a total investment of the order of Rs. 2.4 crores with an employment potential of over 980 persons.

The first major Industrial Complex already developed by SIPCOT is located at Ranipet, North Arcot district. The various infrastructural facilities required for industries at Ranipet over an area of 712 acres are nearing completion. A separate sub-station has been put up by the Electricity Board. The Tamil Nadu Small Industries Development Corporation Limited (SIDCO) which have been allotted 71 acres of land in this Complex to meet the requirements of small scale industries. have already completed construction of twelve sheds and twentyfive more are under construction. These sheds are being allotted to small scale industries by SIDCO. The Tamil Nadu Housing Board have also taken up the construction of various types of houses for the workers over an area of 25 acres at a site adjacent to the Industrial Complex. Developed house sites have also been offered by SIPCOT to entrepreneurs to enable them to construct houses for their officers. Thanks to the simultaneous efforts of SIPCOT for canvassing projects for location in this Complex, a total area of 221.76 acres has already been allotted to 27 projects out of the saleable area of 480 acres. Seven of these units have already gone into production and seven more units are under various stages of construction. The total investment expected to be catalysed when all the units which have been allotted land go into production is estimated at Rs. 25 crores with an employment potential of over 3,000 persons. With the completion of various infrastructural facilities and commencement of production by a number of industrial units, this Industrial Complex has attracted the attention of one and all as one of the most prestigeous Industrial Complexes outside the city of Madras.

Hosur Industrial Complex

Encouraged by the successful development of the Ranipet Industrial Complex and the enthusiastic response that this Complex has been able to evoke from the entrepreneurs within and outside the State, SIPCOT had taken up the development of a second Industrial Complex at Hosur, Dharmapuri district over an area of 1,257 acres. The land acquisition proceedings have already commenced and shortly the development of various items of infrastructural facilities will be taken up. Even before the development of various facilities, a number of entrepreneurs have applied for allotment of land in this Industrial Complex. So far 47 applications have been received by SIPCOT. The estimated outlay on the development of this Industrial Complex is Rs. 2.3 crores and the entire development is likely to be completed over the next two years.

Manamadurai Industrial Complex

The proposal to develop a third Industrial Complex at Manamadurai has already been approved by the State Government and proposals for the acquisition of 112 acres of private land and assignment of 732 acres of Government land have been submitted to the Government. Efforts are being made to canvass projects for location in this Industrial Complex so as to ensure a few seed projects which will ensure the self-sustaining growth of the Industrial Complex when fully developed.

Developed Plots Estates

The Government have transferred to SIPCOT the administration of Developed Plots Estates at Guindy, Ambattur, Madurai, Trichy, Mettur and Thiruvallur. After the transfer of these Developed Plots Estates, SIPCOT is now in a position to offer developed land with all the

infrastructural facilities in almost all the important locations in the State.

2. Implementation of Package Scheme of Incentives

SIPCOT's promotional programme includes a powerful package of incentives designed to stimulate entrepreneurship and make it easier and more profitable for entrepreneurs to set up industries in the backward areas of Tamil Nadu.

Subsidy for Feasibility Studies :

SIPCOT realised that one of the effective ways in which SIPCOT can help the entrepreneur is to help him to take a preliminary decision by offering readymade project feasibility studies of feasible projects at subsidised cost. Initially the subsidy under the scheme ranged from 75% to 100% depending upon the cost of the study. SIPCOT commissions studies either at the request of the entrepreneurs, or on its own whenever it is felt necessary to have a readymade feasibility study.

The scheme has recently been modified. Under the modified scheme in the case of studies costing upto Rs. 20,000/-, the entrepreneur has to contribute 25% of the cost and the balance of 75% of the cost will be borne by SIPCOT initially. In the case of studies costing over Rs. 20,000/-, the entrepreneur will have to meet Rs. 5,000 plus 50% of the cost of the study in excess of Rs. 20,000/-, the balance being initially borne by SIPCOT. When the project is implemented,SIPCOT's contribution towards the cost of the study will be converted as share capital or term loan. As the scheme provides considerable relief by way of reduction in the initial investment made by the entrepreneur in obtaining a feasibility study, SIPCOT hopes that whenever entrepreneurs are examining the possibility of taking up feasible projects for implementation, they will avail themselves of the assistance under the scheme.

Interest Free Sales Tax Loan

Another important incentive implemented by SIPCOT is the Interest Free Sales Tax Loan. Under the scheme existing industries undertaking substantial expansion or diversification in any one of the 9 backward districts of the State are eligible for Interest Free Sales Tax Loan to the extent of the sales tax paid by the existing industrial units during the three years immediately preceding the date of application, subject to a ceiling of 25% of the fixed assets of the expansion or diversification scheme. New industries set up in any of the nine backward districts are also eligible for Interest Free Tax Sales Loan for the first six years of production, the loan in each year being equivalent to the actual sales tax paid by the industrial unit in the previous year subject to a maximum of 8% of the fixed assets of the new unit. These loans offer the most attractive source of finance ofr any industrial project as they are unsecured and subordinated to the equity and are repayable only after 18 years in three equal annual instalments. Total assistance sanctioned under this scheme amount to Rs. 210.55 lakhs in respect of 15 units which have taken up expansion/diversification in backward areas. The total amount disbursed upto 31—3—1975 amount to Rs. 135.23 lakhs. Out of the 14 assisted projects, nine have already gone into production and the remaining five are under the various stages of construction. Four new industrial units have also been issued Provisional Eligibility Certificates for an estimated amount of Rs. 59 lakhs. These units have already gone into production and is eligible for disbursement of assistance under the scheme in 1975—76.

Subsidy on Fixed Assets

The Government of Tamil Nadu have entrusted to SIPCOT the implementation of the Central Outright Grant or Subsidy Scheme, 1971. Under the Scheme new industrial units as also those undertaking substantial expansion in any one of the twentyseven selected backward Taluks are eligible for an Outright Grant or Subsidy of 15% of the fixed assets. The cumulative sanctions upto 31—3—1975 adds upto an impressive figure of Rs. 313.59 lakhs including Rs. 27.61 lakhs in respect of small scale industries before the transfer of small scale industrial units to SIDCO. The subsidy disbursed under the scheme upto 31—3—1975 amounts to Rs. 86.05 lakhs.

Besides the above, SIPCOT also helps entrepreneurs in availing concessional power tariff, water royalty concessions, preferential treatment in Government purchases and obtaining State Government's support for issue of Letters of Intent and Licences.

3. Ancillary Services

As already stated it is SIPCOT's endeavour to provide any service to an entrepreneur for which he cannot look to any specific institution. The important ancillary services provided by SIPCOT include the following :

Project Identification and Supply of Project Profiles

SIPCOT selects feasible projects and prepares project profiles giving sufficient details which would help the entrepreneurs to take a preliminary investment decision. So far forty project profiles have been prepared and the entrepreneurs have taken up implementation of a number of projects based on these profiles.

Entrepreneurial Guidance

By building up necessary data and information on the various aspects of industrial development, SIPCOT is in a position to offer any information and guidance required by entrepreneurs in formulating and implementing any project of its choice.

Consultancy Services

Recognising the dearth of consultancy services in this part of the Country, SIPCOT has recently decided to set up a Consultancy Division. The objective is to provide technical, financial and management consultancy services with a view to help entrepreneurs in project identification, promotion, implementation and successful management.

Locational Guidance

SIPCOT has also been rendering help to entrepreneurs in assessing the merits of alternative locations for the proposed projects with reference to the infrastructure available, proximity to the source of raw material, market potential and facilities available in particular areas.

SIPCOT looks ahead

SIPCOT realises that promotion of industries during a period affected by inflation, power shortage, credit squeeze and a host of other problems is a hard and challenging task ; but it is equipped with the expertise and enterprise to face the challenges and achieve commendable results in the years to come.

INDUSTRIAL CO-OPERATIVES FOR SLUMS

PROVISION MUST BE MADE ALSO FOR SELF-EMPLOYED ARTISANS

It has been common experience that by and large, the phenomenon " Slum Dwellers " is associated with major towns. It is also a fact that these slum dwellers come under the group of persons who are employed in one way or the other though it cannot be said that they have a means of earning a reasonable living wage. It has been a good venture to have thought about the rehabilitation of the slum dwellers by not only providing them hygienic accommodation but locating them in well defined areas. The aim has been to put an end to the unhealthy growth of the slums and the bringing into being well laid out colonies with basic facilities avoiding the possible health hazards.

Since the category of persons who occupy the tenements constructed by the Slum Clearance Board by and large come under the group of unskilled labour and since they are available as a group in those colonies, it is worth while considering whether it is not possible to provide them with some other supplemental source of income. At the outset it has to be reckoned that the occupants in these colonies are as mentioned earlier generally unskilled. A few of them may be semi-skilled, but these persons are generally found to be employed on a fulltime basis in the various concerns. The material available is therefore only skilled labour. The possible avenues to profitably utilise this concentrated unskilled labour could be only the Industrial Co-operative Ventures.

Industrial Co-operative Societies have gone a long way to provide a good source of supplemental income in very many industrial activities. A Cottage Industry like Mat Weaving, Basket Making of a cottage type small scale industries like Hand Match Manufacture or a Workshop type have been the pattern of Industrial Co-operatives. These Industrial Co-operative Societies which have been organised for the workers engaged in cottage industries like mat weaving and basket making etc., as well as the hand made match industries have the advantage that not only it provides work to the elders but also there is adequate scope for the teenagers to assist their elders at home and thus enable them to earn something more. It is true that as in the case of any other industrial products, the cottage industrial products form thinking on the lines of adapting these industries in the shape of Industrial Co-operative Societies for the betterment of the Slum Dwellers. May be some of these people would be totally new to the industry concerned. They may be required some training. Since there are various agencies imparting training and since there are various sources of making available required funds such as the funds available under the schemes for the Backward Class and the various social organisations that are already in existence, it should be possible to locate in the first instance a suitable training ground for the untrained slum dwellers with a view to provide them with a supplemental income later as a Member of an Industrial Co-operative Society to be organised.

As regards those persons who are either semi-skilled or skilled, there is good scope for the skilled type of persons to avail of the opportunities such as SIDCO—TIIC—Consortium and become self employed. For the other semi-skilled persons who perhaps may not have the confidence to become a self-employed person they can organise themselves into an Industrial Co-operative Workshop to function as an ancillary to any of the Medium or Large Scale Units nearby.

It is therefore suggested that the Slum Clearance Board may while drawing up plans for the future tenements under the slum clearance scheme take into account the requirements of the Schemes as above. For a Colony or adjacent colonies put together, a small place may be earmarked to serve as a Training Centre which later on could be handed over to an Industrial Co-operative Society when it is formed. Even the design of the houses may be so constructed as to have a small portion set apart for self occupied craftsman such as a lintal roof for a mat weaver or a partitioned room for a book binder, etc.

It may be concluded by saying that the availability of a group of persons in such large numbers even if they are of the unskilled type for the implementation of employment-oriented schemes should not pose any problem in view of the fact that a majority of the occupants earn their livelihood by hard labour.

After all todays unskilled will be tomorrows semi-skilled and thereafter highly skilled. It is for us to make full use of this vast human potential and chanalise the same for something fruitful and productive. Tamil Nadu has shown the way to other States in various constructive programmes for the weaker sections. Here is one more opportunity to add one more activity to the list.

by

H.B.N. SHETTY I.A.S.,

Chairman and Managing Director, Tamil Nadu Small Industries Development Corporation Limited.

SLUM DWELLERS ENRICH CITY LIFE

—:O:—

GOOD BUS SERVICE GIVES THEM MOBILITY

City centres cannot live and thrive without people, not simply because they lend life and character, but because they are needed to keep the essential services running. If our urban development policies are to conform to socially-oriented goals, these urban poor have to be provided requisite accommodation near their work spots since places of work and places of living are intimately connected in the life of a common man.

Housing is an essential part in any development, not only for the middle and lower middle classes, but also for the poor, along with all attendant facilities like education, health, transport etc. The poor deserve most to be housed near their places of work.

It is the ultimate proposal of the Government of Tamil Nadu to rehabilitate the slum dwellers from all the 1,202 slums in suitable tenements constructed at appropriate locations all through the city at approximately the same places as the original slums.

Most of the slum dwellers are industrial workers who have to commute long distances to and from their work places every day. In addition, self-employed persons like vendors, washermen, fishermen etc, comprise of a sizable slum population. Almost all the slum dwellers have no conveyance of their own (except some persons who might be possessing bicycles which may be used for short trips) and a great majority of them depend on public transportation systems, particularly the bus transport system, for their journeys operated in the city. As could be seen from the location of the slums undertaken by the slum most of them lie on or very close to the road system.

The existing network of bus transportation system covers almost all important motorable roads in the city wherein most of the slums have sprung up, thus providing an opportunity of transportation facilities of dwellers of the above slums.

This facilitates the movement of people in meeting their day-to-day socio-economic and cultural needs, besides providing necessary movement facilities. Hence the important role played by bus transportation in meeting the requirement of the economically weaker sections of society needs no emphasis.

Even though slums have been classified as temporary and pucca, the need for transportation has been duly felt in every case and adequate provision has been made in working out the net work for Madras City. During recent years, the existence of slums are not only found within Madras City, but also in the fringe areas. Ever in such instances, the transportation requirements have been taken care of. Some slums have also sprung up along the banks of the rivers and canals and interior parts of the city. Even in such places adequate transportation facilities have been provided within a short reach. As soon as the slums are improved, attention is also being paid to add more facilities such as terminals etc. according to the requirements.

As already indicated, adequate bus transportation facility is already available for all the slums in Madras City. In the case of slums which have been recently improved or are under improvement programme the existing transportation facilities have been adequately augmented and strengthened to meet the increasing demand.

The Pallavan Transport Corporation is presently operating 1,201 buses in 89 town and 96 city routes in and around Madras City. These are operated from 11 depots. The total route length of city and town services is 3,141.1 kms. and these services cover a total distance of 2,69,060.8 kms. every day in 2,0,423 trips. Thus, it could be seen that all portions of the city, including all the 1,202 slums are well connected by bus services.

A new scheme for development of sites and services intended for the benefit of economically weaker sections of society has been envisaged by Madras Metropolitan Development Authority with financial assistance of World Bank Fund.

Under these schemes, the State Housing Board and Tamil Nadu Slum Clearance Board have selected the following twelve suburban locations outside Madras City for implementation :

1. Arumbakkam
2. Manali Stage I
3. Villivakkam
4. Manali Stage II
5. Palavakkam
6. Maraimalai Nagar—I
7. Velacheri
8. Maraimalai Nagar—II
9. Ambattur
10. K.K. Nagar Extension
11. Nerkunram
12. Kodungaiyur.

The physical layouts of all these projects are so conceived as to provide the optimum mass transportation facility like bus terminals etc. and circulation pattern so that it could be easily accessible to all parts of the scheme area, especially for the economically weaker sections of society.

Besides, it is also proposed to introduce new transportation services including terminal and other facilities and to augment and strengthen the existing services in the areas where slum clearance and improvement programmes are contemplated in future in and around Madras City.

The importance of bus transportation, expecially to the economically weaker sections of society, cannot be ever emphasised. The Tamil Nadu Government is committed to extending all the required infrastructural facilities including transport to all the sections of society, more so for the slum dewllers who are being rehabilitated. The Pallavan Transport Corporation, being a monopoly concern in Madras City and operating a maximum number of nationalised services in Chingleput District is committed to provide adequate, safe and comfortable transport facilities at economic rates to the vulnerable section of society. No doubt, most of these services operated or proposed to be operated to cater to the economically weaker sections may not be economically viable. But, consistent with the policy of the Government, both at the State and at the Centre the social cost involved in meeting the transportation needs of the havenots have to be subsidised by the Government in the interest of providing equal opportunities to all sections of society.

By

R. THILLAINAYAGAM,

B.E., B.L., F.I.E.,

Managing Director,

Pallavan Transport Corporation Ltd.,

Madras-2.

IMPROVEMENT OF SLUM DWELLERS LOT THROUGH SMALL SCALE INDUSTRIES

A CONSTRUCTIVE APPROACH OF SLUM BOARD IN TAMIL NADU

Improvement and clearance of slums is perhaps one of the best socio-economic plans and it is gratifying that in Tamil Nadu, under the able dynamic leadership of its Chairman, the Slum Clearance Board has launched upon this programme in a very pragmatic and systematic manner, which has been attracting a large number of visitors from all over the country and abroad. The overseas visitors particularly have a special word of praise for the concerted efforts in rehabilitating the slum dwellers and converting the erstwhile slums to proper living habitats with modern amenities.

A number of such clusters have come up in vantage points in the city of Madras and some more are on the way. In most of these centres social welfare activities have been taken up for providing environmental hygiene, recreational facilities and common amenities.

Prevention of unemployment in slums

The underemployed lot in these slums can be provided gainful employment by having small cottage industry units in their homes on a self-employment basis either as a full-time work or as part-time work or a combination of both. Small Industrial Co-operatives to bring together all such self-employment seeking entrepreneurs could be organised with active assistance from Governmental agencies and financing institutions.

Suggestive types of units

The types of units to be organised could be brought under two main headings, *viz.*, Consumer Products and Ancillary or Sub-contracted items. Among the Consumer Products could be listed : Cleaning and Scrubbing Brushes, Readymade garments and Uniforms, Ink, Note Books, Paper and Plastic covers, simple Chemical Intermediates, Knitwear, Phenyle, Buttons, Simple Furniture and goods, Handicrafts. The ancillary and subcontractable items will include, Plastic moulded goods, Cardboard cartons, Amplifier and Electronic Sub-assemblies like coils and circuit modules, sub-sasembly work for electrical appliances like Fans, Heaters and Food Mixers etc. The list is only suggestive and there are many more items besides servicing work like Radio repairs, Tailoring, Watch Repair, Photo-framing, Repair and Servicing of Electrical Appliances etc.

Capital required for employment facilities

The capital required for most of the above lines would not exceed Rs. 5,000 to Rs. 10,000 and the employment generation is considerable. Above all such involvement in self-employment and part-employment will provide a peaceful atmosphere besides raising their economic and social status. This would also contribute very greatly towards making them cleanliness—conscious—which is one of the main objectives of the slum improvement.

Assistance by Banks

The Nationalised Banks and other leading Commercial Banks can adopt one or two slums each on the lines of the " Lead Bank " concept and channelised financial assistance to individuals or co-operatives. In this venture, the active assistance from the State Industries Department, Small Industries Service Institute and the State Small Scale Industries Association is imminent in carrying out mini-techno-economic surveys for each group of slums and identifying both the potential entrepreneur and the line. They will also identify the parent-units, who will help in forming out or sub-contracting. The Small Industries Service Institute could also provide simple training facilities wherever feasible. This will provide a systematic approach to this venture and will bring into its fold a good number of enterprising and enlightened slum dwellers.

by

E. N. NARAYANASWAMY,
B.E., M.I.E., A.M.I.E., S.M.I.E. (U.S.A.),
Jt. Director of Industries and Commerce,
Government of Tamil Nadu.

SLUM CLEARANCE BOARD IS ALWAYS COST CONSCIOUS

The Tamil Nadu Slum Clearance Board is always cost conscious and has experimented on several cost reduction methods. The latest of the innovations is the adoption of Gunniting Process for building construction.

Gunniting is the process of shooting a mixture of sand and cement by an air compressor through a cement gun with the addition of suitable quanity of water. The resultant product possesses a very high strength, density, tensile and compressive strengths and impermeability compared to normal 1 : 2 : 4 concrete. Use of this method was hitherto limited to render impermeable lining for dams and for plugging cracks in RCC structures.

The process is most suited for mass construction of pre-fabricated units. Owing to the convenience the method offers in pre-fabricating components of buildings such as column blocks, beams, wall and roof panels etc., large scale housing programmes may adopt this method.

Walls are designed to serve as partitions only. The permissible working stresses in the Gunnited mix is taken at 2,000 pounds per square inch against 900 pounds per square inch with the normal 1 : 2: 4 mix. The foundation course, flooring and plastering are gunnited in-situ.

The following advantages are claimed :—

1. Time of completion is less.
2. Saving upto 15% in cost.
3. Specially, skilled labour is not required.
4. Equipments required are portable and made indigenously.
5. Suitable for all weather conditions.
6. Cement, Steel and river sand are alone needed.
7. Carpet area is more as walls occupy a comparably smaller area.
8. Saving in the use of steel upto 15% because of the usage of weld mesh and chicken mesh and cement upto 25%.
9. Requires no roof centering and scaffolding.
10. Weather proofing course for the roof may be avoided.

THE TAMIL NADU STATE CO-OPERATIVE BANK LIMITED

19/20, Linghi Chetty Street, MADRAS-600001.

Telegrams : URBANK Telephone : 20367 Telex : SM. 2527

RATES OF INTEREST ON DEPOSITS

Effective from 23rd July, 1974

1. Current Deposits — No Interest
2. Savings Bank Accounts — Interest will be allowed at 5·50 per cent per annum on monthly minimum balances.
3. **Season Deposits for sums of Rs. 1000/- and over :**

   Deposits for 15 days to 45 days : 3.00% per annum
   Deposits for 46 days to 90 days : 3·50% per annum

4. **Fixed Deposits for sums of Rs. 100/- and over :**

Period of Deposits	**Rate % per annum**
91 days and above but less than 6 months	5.50
6 months and above but less than 9 months	6.00
9 months and above but less than 1 year	7·00
1 year and above but less than 3 years	8.00
3 years and above but upto and inclusive of 5 years	9·00
Above 5 years	10.00

THE BENEFIT OF HIGHER RATE OF INTEREST WILL BE AVAILABLE TO THE EXISTING TERM DEPOSITS FOR THE UNEXPIRED PORTION OF THEIR CONTRACTED PERIODS.

INTEREST PAID MONTHLY ON FIXED DEPOSITS for Rs. 1,000/- and over and for periods of one year and over.

N. L. Hoblikar, Managing Director.

Kodavasal C. **Krishnamurthy,** Vice-Chairman.

R. Kanakasabai, Chairman.

INFRASTRUCTURE FACILITIES ARE ESSENTIAL FOR INDUSTRIAL GROWTH

TAMIL NADU GOVERNMENT TAKES UTMOST CARE TO PROVIDE FOR ENTREPRENEURS

In any country, whether developed or underdeveloped, the existance of infrastructure facilities is indispensable for the healthy growth of industries. These facilities create an awareness among the entrepreneurial class to undertake new industrial ventures and to expand and diversify existing ones and the measure of growth and development of industries could be gauged on the basis of this conducive atmosphere. The facilities like industrial estates, developed plots, water, power and communications mainly constitute the basic needs of the industries. During the last decade, the Government took strenuous efforts to develop the infrastructure facilities.

Industrial Estates :

The experience gained on the Industrial Estates programme from 1955 onwards and further perfected by the developments achieved on this front in the United Kingdom where industrail estates flourish for several years, had helped to draw up comprehensive schemes of industrial estates programme. India, today has a well-developed programme of this kind.

Tamil Nadu is one of the few States which have achieved commendable progress in the development of industrial estates. The main objectives of the industrial estates programme are to promote the development of industries by creating facilities, to disperse the small scale industries in rural areas, to shift the industries from conjested areas to conforming areas and to encourage the growth of ancillary industries.

The estates are classified as urban estates, semi-urban estates and rural estates. After gradual development, the units in the urban estates gains sufficient technical ability and they are assisted to move into semi-urban or rural areas. The rural industrial estates are aimed at the dispersal of industries in rural and backward areas. The rural areas do not produce entrepreneurs to start industries and they move into towns and cities. It takes a long time to establish the rural estates than urban and semi-urban estates and by extending the concessions and incentives, entrepreneurs could be attracted to rural areas.

The estates are of different types, namely :—

(a) Conventional Industrial Estates to cater to the different types of industries ;

(b) Functional Industrial Estates catering to the requirements of certain sophisticated industries ;

(c) Ancillary Industrial Estates to serve as ancillaries to the large and medium industries in and around the areas ;

(d) Co-operative Industrial Estates set up with the active participation of the entrepreneurs ; and

(e) Private Industrial Estates set up with the assistance of leading private industrialists of the areas.

The Industrial Estates offered to the small scale industries, primary facilities like suitably planned and common facilities, environments with water, power and communication conforming to the regulations prescribed under the Town Planning, Municipalities, Panchayats and Factory Acts. The Common facilities such as Tool Rooms, Electroplating, Foundries, Heat Treatment Plants, Forging units, Raw material depots to render service at reasonable charges are made available. The Government also provides railway sidings, post and telegraph facilities, training and demonstration centres wherever necessary. With a view to help the industrialists, subsidised rent is charged initially and later converted into economic rent. The sheds constructed in the estates are of different standards and designs to suit the general needs of the industries. In the beginning, the sheds were allotted on rental basis and gradually sheds, particularly in semi-urban and rural areas are now allotted on hire purchase system.

The Department of Industries and Commerce had programmed for the systematic establishmentof industrial estates in the Second, Third and Fourth Plan periods. These estates have given a boost for the development of a variety of small scale industries in Tamil Nadu. The major estates at Guindy and Ambattur are the master pieces. The constraints and benefits experienced in the working of these two estates helped to plan and execute industrial estates in other centres of the State with necessary modifications.

The Tamil Nadu Small Industries Development Corporation has taken over from the Department of Industries and Commerce, the functions of all the conventional Industrial Estates with effect from June, 1974.

During the year 1967—68, 665 factory sheds were constructed. At the end of 1974—75 there were 1,027 sheds and a sum of Rs. 45.00 lakhs was spent on industrial estates programme during 1974—75.

Developed Plots :

Apart from setting up Industrial Estates, developed plots estates have also been set up in areas where there are excellent potential for the growth of industries. The scheme envisages acquisition of lands and developing these sites by providing roads, electricity, water, sewage, railway siding facilities etc., and

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allotting them to large, medium and small scale industries. **The developed plots estates were transferred to the State Industries Promotion Corporation of Tamil Nadu from September, 1974. Till the end of January, 75, 1,056 acres of land were allotted to large, medium and small industries and it involved an expenditure of about Rs. 10 lakhs during 1974—75.**

The programmes of these industrial estates and developed plots have given a good encouragement to the industrialists and there is today, acute competition for the allotment of factory sheds and developed plots.

Infrastructure Facilities for Large and Medium Industries :

The provision of infrastructure facilities for large and medium industries involves a study of the requirements of land, water and power for their development in different regions.

Land :

The development of suitable land sites, for promoting new industries, with the ready availability of other basic facilities, is essential to locate new industries on a dispersed basis. We have acquired considerable experience in developing industrial sites at Ambattur and other areas. While the industrial estates will take care of the requirements of small and ancillary industries, it is contemplated that new schemes have to be formulated for developing developed plots for large industries as has been done in Maharashtra.

With a view to give a powerful boost for the development of industries in backward areas, the State Industries Promotion Corporation of Tamil Nadu have launched an ambitious programme of developing industrial complexes in potential growth centres.

The essential features of this strategy are, selection of growth centres which have potential for development, provision of all infrastructure facilities in these centres and promoting projects to ensure that the growth centres attain the stage of self-sustaining growth in the shortest possible time.

An area of 712 acres at Ranipet was acquired from Government towards the end of 1972—73 and upto the end of January, 75, an area of of about 225 acres were allotted out of the saleable area of about 480 acres.

A second industrial complex over an area of 271 acres will be developed at Hosur in Dharmapuri district and a third one will be located near Manamadurai in Ramanathapuram district involving an area of 1,545 acres of land.

The State Planning Commission has suggested development of a stretch of 25 miles of land from Madras City on the Madras-Chingleput, National Highway and a similar stretch of land onthe Tiruchirapalli—Villupuram National Highway, into developed plots for large and medium industries to be set up in the private sector. The success of these complexes will depand on the availability of water and access to raw material supplies.

Water :

In Tamil Nadu, the supply of water for industrial purpose has not so far presented any problem because of the availability and utilisation of river waters and wells, sunk in the river beds and adjoining areas. A beginning has been made in this direction in the Manali-Petro-Chemical complex. In Neyveli, nature has endowed with abundant water. But utilisation of water for industrial purposes pose the problem of pollution due to the discharge of effluents. Hence effluents have to be treated before being discharged, as otherwise they will harm agricultural operations.

According to an estimate of the State Planning Commission, 150 million gallons daily may be required for the new industries in Salem, Tuticorin, Coimbatore, Tiruchirapalli, Madras and other complexes. It has been indicated that the existing irrigation systems need modernisation ; wherever possible conservation of water resources have to be attempted ; research on desalinisation of water for industrial purpose has to be intensified and help from adjoining and States like Kerala Andhra Pradesh may also be obtained. It is estimated that 250 million gallons of water will be required daily for industrial purpose. The Commission has suggested for long-range planning to augment water resources.

Power :

With the setting up of new industries in Tamil Nadu, the requirement for power will also increase at a faster rate, especially in the case of power-intensive industries. in 1967—68, the power consumption by industries was 2,043 m.u. against the total generation of 4,857 million units. This rose to 2,484 m.u. in 1973—74 and about 50 per cent of the total powr generated is consumed by the different industries in Tamil Nadu.

Communications :

Tamil Nadu is one of the few States with a well-developed network of roads and transport facilities particularly in the industrial areas. All the industrial centres are linked with places of commercial activity. The total road mileage in the State had registered more than two-fold increase from about 33,920 kms at the beginning of the First Plan period to 77,463 kms. in 1974. Now, the emphasis is on the development of roads in backward areas.

The railways serve as arteries of any economy. Tamil Nadu had 3,586 kilometres railway line in 1967. In 1974, the legnth of the railway line had increased to 3,765.08 kms. The State has a well-laid system of rail connections with all important towns and commercial centres.

Tamil Nadu is served by the major port of Madras, three intermediate ports of Tuticorin, Cuddalore and Nagapattinam and seven minor ports.

The important centres of indutry, trade, business and banking in the State *viz.*, Coimbatore, Madurai, Madras and Tiruchirapalli are on the air map of the State.

It may be said that rapid industrialisation is a *sin qua non* for economic development to meet the multifarious needs of the people. The provision of infrastructure facilities such as land, water and power are the essential concomitants of industrial expansion.

FROM 3,000 IN 1961 TO 42,323 IN 1974

THE MANY PROPS WHICH LED TO GROWTH OF INDUSTRIES

Tamil Nadu is one of the few States which have achieved tremendous industrial progress. In 1961, there were, only 3,000 registered small scale industries. This rose to 11,813 in 1967 and 42,323 in 1974. During this period, the progress made by small scale industries in Tamil Nadu has been quite spectacular in terms of increase in the number of units, volume of output, contribution to national income, the variety of new industrial products manufactured, employment generated and dispersal of industries.

The Government of Tamil Nadu have launched several comprehensive programme for the development of small scale industries in the State by offering incentives and concessions to the existing and prospective entrepreneurs. The various schemes of incentives and concessions have encouraged the establishment of new industrial units and expansion of existing industrial entreprises.

Industrial Estates and Developed Plots

The programme of industrial estates is an effective method for fostering industrial development on a decentralised pattern and for dispersing industries in rural and backward areas. In the establishment of industrial estates, the State has been a pioneer and these estates have been set up all over the state. These estates offer all the primary facilities and healthy environments to the small scale industries.

The factory sheds in the industrial estates are allotted to entrepreneurs on hire purchase basis. In the developed plots, where lands acquired are developed with all the infrastructure like water, electricity and other suitable common facilities, are assigned to the industrialists on instalment terms or on a lease basis for 95 years.

With effect from October, 1969, new units using H.T. power are charged a concessional tariff for 5 years. The full tariff is payable only from the sixth year onwards as follows :

1. For the first 3 years : 66 2/3% of the normal H.T. tariff.

2. For the Fourth year : 80% of the normal H.T. tariff.

3. For the Fifth year : 90% of normal H.T. tariff.

The new and existing industries working on night shift are also eligible for this concessional tariff. The new units using H.T. power are exempt from electricity consumption tax for the first 5 years.

Preferential Treatment in Government Purchase-Price Preference

A price preference upto 15 per cent is allowed for the products of small scale inudstries in the State.

The products of medium and major industries in Tamil Nadu will be given a price preference to the extent of 10 per cent in Government purchases over the products of industries located in other States. This concession is made available through the State Industries Promotion Corporation of Tamil Nadu.

Financial Assistance

The Department of Industries and Commerce grants loan to small scale industries, in the Rural Industries project areas and Small Industrial Co-operative Societies and Cottage Industries, under the State Aid to Industries Act.

The Tamil Nadu Industrial Investment Corporation offers long term loans to the extent of 75 per cent of the value of the assets offered as security including the additions proposed to be made for acquiring fixed assets. The interest charged is 10.5 per cent per annum and the period of loan is 10 years.

The Tamil Nadu Small Industries Development Corporation has introduced " Consortium Scheme " in collaboration with the Tamil Nadu Industrial Investment Corporation and this came into effect in April, 74. Under this scheme, the entrepreneurs are given 90 per cent of the value of land, building, machinery etc. and in the case of technocrats 100 per cent finance is granted. The rate of interest charged is 10.5 per cent per annum and the loan has to be repaid within a period of 10 years.

Other Assistance

The Tamil Nadu Small Industries Development Corporation, a centralised agency, renders assistance to small scale units in procuring essential raw materials, constructing work sheds and making them available to small scale industries on hire purchase basis, offering technical consultancy for new entrepreneurs,

providing marketing assistance and promoting exports.

Concessions to Backward Areas :

The Planning Commission has specified 8 (now 9 districts)of the 14 districts of the State as backward which cover 67 per cent of the total area and 60 per cent population of Tamil Nadu. The Government have taken a number of measures to develop industries in backward districts. The long term loans granted by the Tamil Nadu Industrial Investment Corporation in the backward districts have to be repaid over a period of 14 years.

Concessional Power Tariff

In addition to the concessional power tariff granted to new industries to be set up in any of the 40 identified backward taluks in the State, a further reduction of 15 per cent in tariff is allowed. This concession has been extended to benefit the new industries to be located in 16 more backward taluks, with effect from October, 1973 and the scheme is administered by the StateIndustries Promotion Corporation of Tamil Nadu.

Subsidy on Fixed Assets

The new small scale industrial units to be set up in any one of the 27 backward taluks in Tamil Nadu are eligible for outright grant or subsidy equivalent to 15 per cent of fixed capital investment. The Tamil Nadu Small Industries Development Corporation is implementing this scheme with effect from April, 1974.

The new medium and major industries in the backward areas are provided grant or subsidy of 15 per cent of the fixed assets. This scheme of Central outright grant or Subsidy introduced in February, 1972 in Tamil Nadu is implemented by the State Industries Promotion Corporation of Tamil Nadu.

Interest-Free Sales Tax Loan

The grant of interest-free sales tax loan is yet another form of incentive available to medium and major industries to be located in any of the 9 backward districts of the State. **The existing industries, undertaking substantial expansion or diversification are given interest-free sales tax loan to the extent of sales tax paid by such units for 3 years immediately proceeding the date of application, subject to a maximum of 25 per cent of the fixed assets.** The new industries to be set up are eligible for this loan every year for the first 6 years of production, the quantum of loan admissible in each year being limited to the actual sales tax paid by the industrial unit in the previous year subject to a maximum of 8 per cent of the fixed assets. These loans which are unsecured and subordinate to the equity capital, are repayable in 3 equal annual instalments only after 18 years. This scheme is operated through the State Industries Promotion Corporation of Tamil Nadu.

Concession in Water Royalties

Normally, industries are permitted to divert water from public sources by mechanical contrivances on payment of a royalty of Rs. 16 per 1,000 cubic metres, subject to a minimum of Rs. 200 per annum, With effect from December, 1972, the Government had introduced a modified scheme under which the new industries to be set up in any of the backward districts of the State would be permitted to draw water from public sources on payment of a fixed amount of Rs. 200 per annum as water royalty, irrespective of the quantity of water drawn for an initial period of 6 years.

The growth of industries in Tamil Nadu have largely been influenced by the attractive incentives and concessions afforded by the Government. The development of industries have been mainly confined to metropolitan cities and big towns. But the measures which have been introduced by the Government in recent years to secure a wide spread of industries has helped growth of industries in all the areas.

BACKWARD

AREAS

NEED

NOT

BE

BACKWARD

FOREVER

TANSITTING PRETTY!

Sitting pretty with TANSI.
Quality and pretty-pretty.
Steel and Wooden
Furniture. Leather goods
and leather footwear.
Just two from TANSI.

A score and more for
various utilities. You can
rest assured, sometime
some place you have
known TANSI.

TANSI

TAMIL NADU SMALL INDUSTRIES CORPORATION LIMITED,

26, Whites Road,
Madras-600014

BRIGHT PROSPECTS FOR CHEMICAL INDUSTRIES IN TAMIL NADU

In a nation's economy chemical industries occupy a vital position and the progress achieved in the field of industries can be gauged by the level of development attained by these industries. The production of chemicals is essential for the manufacture of various products such as heavy chemicals, fine chemicals, fertilizers and insecticides, drugs and plastics, dye stuffs and intermediates, cement, textile rayon, rubber, paper and petroleum refining.

Growth of the Industry

In Tamil Nadu, the Chemical Industries have grown from an infant stage over two decades ago, to an impressive stature. During the Plan Periods, proper climate was created for the rapid development of this industry and several branches of this industry got established and drew up schemes for development. **Chemical Industry has been developed in the field of heavy chemicals, fertilizers, sugar, cement, etc. In view of the availability of natural resources especially from sea, air, forest and mines, there is vast scope for developing this industry in the State.** The giant Neyveli complex at Neyveli and the Petro Chemical complex at Manali offer immense possibilities for developing organic chemical industries.

The State ranks first in the manufacture of super phosphate and second in the manufacture of caustic soda and sulphuric acid. The State has a well developed fertilizer industry and accounts for a substantial production of chlorine based industries, such as P.V.C. Chlorinated solvents, soaps, Vanaspathi, Paints and Varnishes etc. The Dharangadara Chemical Works Limited at Sahupuram, has expanded its activities considerably over the past few years and has now a capacity of producing 140 tonnes of caustic soda daily along with 60 tonnes of Liquid chlorine, 130 tonnes of hydrochloric acid, 15 tonnes of Trichlore ethyline, 15 tonnes of petrochlore ethylene and 100 tonnes of beneficiated ethylene and there will be further expansion of the production capacity especially to produce caustic soda. The Mettur Chemicals and Industrial Corporation which is perhaps the first to produce caustic soda is another major venture with a capacity to produce 120 tonnes daily. The unit also produces chloromathene. The unit has proposals to increase the production of caustic soda by 40 tonnes. There are other chemical industries in Mettur which produce chloromethene, P.V.C., and Benzene hexochloride.

In Tamil Nadu, one industry alone enjoy the monopoly of manufacturing calcium carbide. This industry which produces 10,000 units of calcium carbide annually is located at Sankarnagar in Tirunelveli District.

In the manufacture of man-made fibres, Tamil Nadu had made a beginning. The South India Viscose had set up a Rayon Factory in 1961 at Sirumugai near Mettupalayam for the manufacture of 4,000 tonnes of staple fibre and 4,000 tonnes of rayon per year. Subsequently, a new pulp plant was set up with a capacity of 21,000 tonnes per year with plans to go upto 30,000 tonnes annually.

In the field of Chemical fertilizers, considerable progress has been made. The first large-sized unit for manufacturing Urea based on lignite, commenced working in Neyveli in 1965 with a capacity of 500 tonnes per day. This is an adjunct to the Neyveli Lignite Corporation. During the year 1968, Rs. 4.8 crores worth of urea was produced.

The Parry and Company has been marketing fertilisers for nearly over 60 years. A plant of this company set up at Ennore in 1962 had a capacity to produce 51,000 tonnes of ammonium phosphate and sulphate and recently it has increased the capacity to produce ammonium sulphate by 38,000 tonnes per annum. The Madras Fertilizer Plant set up at Manali at a capital cost of Rs. 65.48 crores had commenced its seeding programme in 1967 with the object of promoting the orderly development of market for the company's complex NPK fertilisers and urea. The plant has the capacity to produce 750 tonnes of Ammonia, 885 tonnes of urea and 1,100 tonnes of NPK.

Petro-Chemicals in Tamil Nadu

With the establishment of the Oil Refinery in Manali, impressive progress has been made in the development of petro-chemicals industry in Manali area. Another petro-chemical complex is fast coming up in the Tuticorin area with the

biggest Fertiliser plant of Southern Petro-Chemical Industries Corporation under construction. The capacity of ammonia plant will be 1,100 tonnes per day and many allied and downstream units for producing heavy water, causticsoda,ammonium chloride will also come into being.

There is much scope for the development of Chemical industries in Tamil Nadu. The Imperial Chemical Industries has proposed to set up a 1/2 million tonnes naphtha cracker plant. There is the possibility of downstream units being developed to produce ethylene, polypropylene and budiene near the Madras Refinery.

The Engineers India Limited have putforth four schemes with different Naptha Cracker Capacities. The Government of Tamil Nadu is contemplating to set up a Naphtha Cracker Unit at Manali at an outlay of Rs. 90 crores.

The Tamil Nadu Government has plans to set up a plant for producing annually 2,100 tonnes of Nylon Textile Filament yarn at a capital cost of Rs. 10 crores.

The scope for further development of chemical and allied industries is bright. The existence of salt resources in Tamil Nadu offers scope to augment the production of Caustic soda, soda ash and various other chemicals. With the faster development of Engineering industries, the demand for producing acetylene gas will increase. There will necessarily have to be a bigger output of fertilisers.

Small Scale Chemical Industries

In Tamil Nadu, at the end of 1966, there were 273 registered small scale chemical industries and this rose to 5,217 units in June, 1974. These industries mostly comprise those, manufacturing organic, inorganic fine chemicals, heavy chemicals, soaps (washing and toilet) natural and essential oils, Photographic chemicals, Hydrogenated oils and other miscellaneous chemicals.

The Department of Industries and Commerce has identified areas of development after making a thorough survey for starting new chemical industries and reports are also available highlighting the possibility of utilising the bye-products available from Neyveli complex.

STATE RANKS FIRST IN SUPER PHOSPHATE MANUFACTURE

In Tamil Nadu, particularly in the small scale sector, there is much scope for the development of industries for producing chemicals like paints and varnishes, acids, sulphates, industrial yeast, basic magnesium carbonate, dye stuffs, plasticsers, pesticidal formulation, disinfectants, plastic processed goods, dehydrated castor oil, melamine formaldehyde etc.

A Functional Industrial Estate for Chemicals (now administered by the SIDCO) was set up at Mettur during the Annual Plan Period (1966—1969) and separate blocks have been provided for chemical industries in the Industrial Estate at Ambattur. In these estates ready built factory sheds and developed plots with facilities for power, water and effluent disposal are allotted.

Chemical Wing

The Chemical Testing and Analytical Laboratory and Mechanical and Mettalurgical Laboratory at Guindy offer testing facilities to industrialists in private and public sectors. They undertake chemical, physical and Metallurgical testing of all types of industrial raw materials and finished goods. In 1969—70, 2,785 samples were tested. During 1974—75 (upto November, 75) 1,445 samples were analysed.

Chemical Engineering Wing

This branch undertakes investigations relating to Chemical Industries, pilot plant studies for the manufacture of certain industrial chemicals and prepares feasibility reports. Pilot plant investigation like manufacture of plaster of paris from gypsum, buffing and polishing components, calcium anhydrite from gypsum, potasium chloride from sea bitterns were conducted. This branch also provides technical knowhow and process development for the salt-based industries.

Sago Research Laboratory, Salem

This laboratory caters to the needs of Sago and Starch industries in Salem District. The laboratory besides testing of sago and starch products as per ISI specifications also gives, technical guidance to the manufacturers processing, manufacturing, yield operation efficiency and purity of products.

Regional Testing Laboratory, Madura

With a view to cater to the needs of industrialists in Madurai, Tirunelveli, Ramanathapuram and Kanyakumari Districts, this laboratory was set up in September, 1972. During 1972—73 the laboratory had tested 72 samples which rose to 728 in 1973—74. A second Regional Testing Laboratory is being set up at Coimbatore for the benefit of industries in that region.

Marine Research Station at Tuticorin

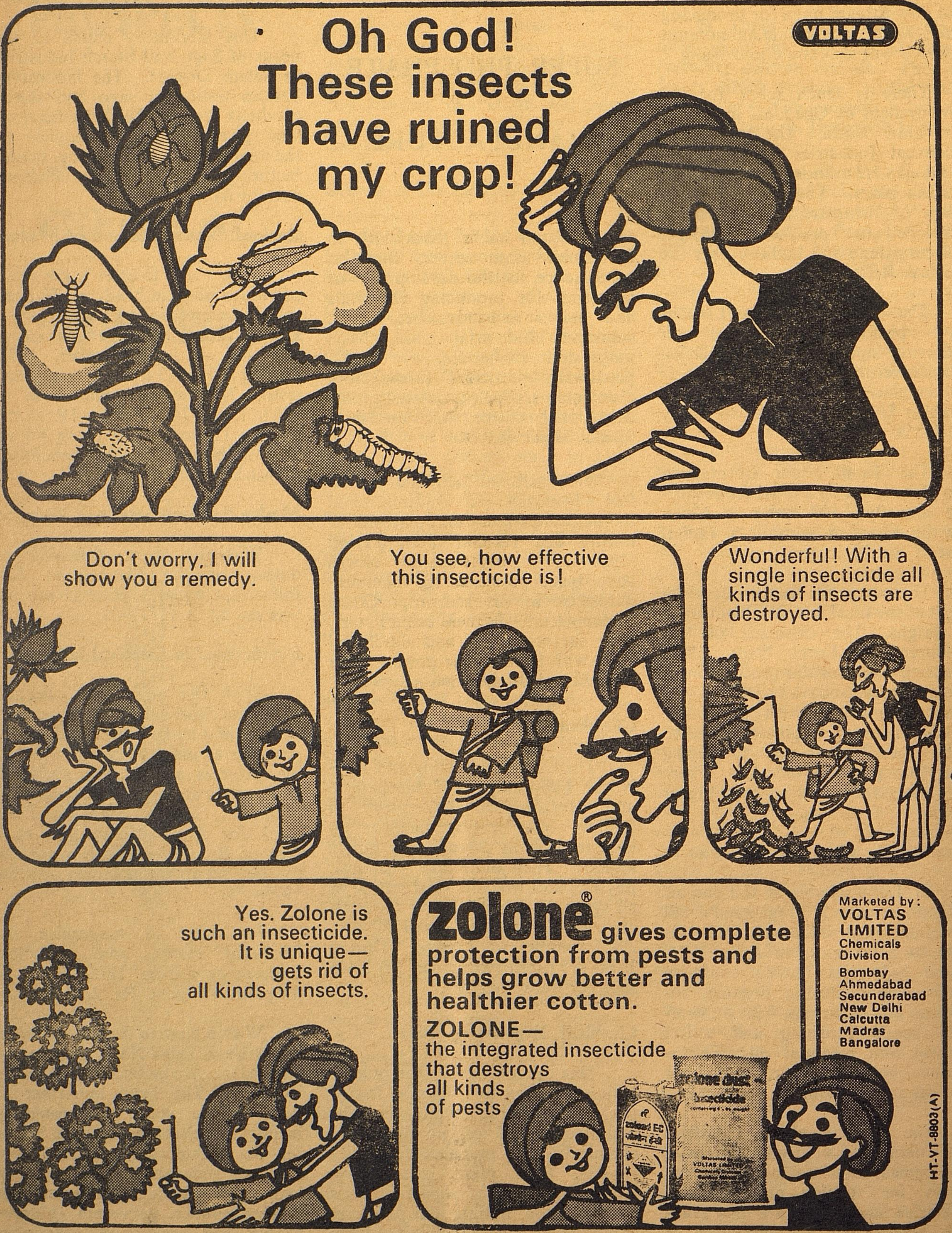
With the object of raising the output of the Mechanised Salt Industry, the marine research scheme was set up in 1971—72.

Development of Chemical Industries

With the object of collecting upto date classified data from various sources and make available to entrepreneurs to assist them in formulating projects and ensure regulated and orderly development of chemical industries in the State, a Data Bank for chemical industries at a cost of Rs. 0.25 lakhs is proposed to be set up at Madras during 1975—76.

In order to modernise the Chemical Testing and Analytical Laboratory during 1975—76, it is proposed to spend Rs. 2.50 lakhs.

With a view to develop chemical industries in Tamil Nadu, the Government have taken up several progressive measures. The most important of them is the policy of promoting industrial projects in the Joint Sector for the manufacture of fertilizers, soda ash, ammonium chloride, sodium hydrosulphite,basic chromium sulphate tanning powder, potassium chlorate, boraax and boric acid, aluminium fluoride, drugs, industrial salt and polystyrene film.


Oh God! These insects have ruined my crop!
VOLTAS
Don't worry, I will show you a remedy.
You see, how effective this insecticide is!
Wonderful! With a single insecticide all kinds of insects are destroyed.
Yes. Zolone is such an insecticide. It is unique— gets rid of all kinds of insects.
zolone® gives complete protection from pests and helps grow better and healthier cotton.
ZOLONE— the integrated insecticide that destroys all kinds of pests
Marketed by: VOLTAS LIMITED Chemicals Division
Bombay Ahmedabad Secunderabad New Delhi Calcutta Madras Bangalore
HT-VT-8803(A)

IF NECESSITY IS THE MOTHER OF INVENTION KNOWHOW IS THE BASIS FOR DEVELOPMENT

—*—

INDUSTRIES DEPARTMENT'S ADVISORY SERVICES

The development of industries is dependant on the measure of technical assistance and know-how provided by the Government and other research and development organisations. The availability of this assistance in its varied forms helps the hesitant entrepreneurs with meagre means to hasten their efforts to embark upon new industrial ventures.

The developmental programmes of the Govt. for the growth of Small Scale Industries are invariably followed by the provision of certain common services in the sphere of technical assistance. Although the number of institutions are not in large numbers, the measure of technical assistance catalysed is of immense value.

MARKETING, STANDARDISATION AND QUALITY CONTROL

Marketing

The slow and meagre growth of the small scale industries for quite some time was mainly due to lack of proper marketing facilities. With the developmental programmes for the growth of small scale industries, marketing facilities should also be made available for securing balancing effect in the sector.

The programmes in the field of marketing, comprised of marketing, export marketing, conducting market research investigation and surveys and also branding of common products manufactured by small scale units.

The Department of Industries and Commerce, registers small scale industrial units in Tamil Nadu and issues small scale industries registration certificates to make them eligible for all the assistance rendered by the State and Central Governments. Survey of capacities in the small scale sector and maintenance of statistical data are all done by the Department.

The Small Industries Service Institute, Madras a Government of India organisation provides technical assistance. It provides market research assistance through distribution aid surveys and industry product market surveys with a view to enable the entrepreneurs to plan and execute their programme.

Tamil Nadu Sub-Contract Exchange

The exchange enlists the capacity of the small scale industries and receives enquiries from the prospective buyers. Based on informations on capacities, available with small scale units, the suitable large units are are located as buyers on the enquiries.

Permanent Exhibitions

The Department has organised a permanent exhibition at Guindy to project the role of small industry in the field of development of industries and another exhibition on a large scale will be set up at Ambattur. These exhibitions also provide an opportunity for small entreprises to see the wide arrays to products manufactured by others with a view to enthuse them in developing new lines of production.

Price Preferencee

The Department arranges the small scale industries to take part in the Government stores purchase programme. The State Government allows price preference upto 15 per cent for the products of small scale and Cottage Industries over the prices quoted for the same articles produced by the large scale industries and upto 10 per cent to the products of cottage, small scale and large scale industries produced within this State against these manufactured outside this State but within India.

Export Promotion

The Tamil Nadu Small Industries Development Corporation, being an Export House, consolidates small value import licences issued to S.S.I. Units and import on their behalf, such of the raw materials, which could be bulked. The Corporation has identified about half a dozen Finished Leather producing units in the Small Scale Industries sector to export their products through the Corporation.

It is essential to create adequate standards and export consciousness among the entrepreneurs. **The Small Industries Service Industries provides the required know-how and other facilities like export promotion, export consultancy, technical know-how of the export products, conducting management and technical training programmes, product selection for export market and coordination and liaison activities.**

Useful Services of Small Industries Service Institute

Standardisation and quality control testing facilities :

In the age of science and technology, standardisation and quality control are vital for the healthy development of industries. This is all the more important for small scale industries which resort to greater use of manpower in the manufacturing process. The State Government affords testing facilities to improve the quality of the products.

Chemical Testing and Analytical Laboratory, Madras

This Laboratory which commenced its activities in 1951 is equipped to undertake full range of testing various industrial raw materials and finished products. The Small Scale Industries are given 50 per cent concession in the levy of fees for the samples tested and the Indian Standards Institution is shown 33 1/3 per cent concession.

Mechanical and Metallurgical Laboratory, Madras

The laboratory undertakes testing of hardness impact, fatigue, creep, spring, compression, tesnsile etc.

During the calender year 1968, these laboratories had tested 1,300 samples. In 1973—74, 3,760 samples were tested and in 1974—75, upto the end of September 74, about 1,465 samples were tested.

Sago Research Laboratory, Salem

Sago and Starch products are tested here as per I.S.I. specifications. This laboratory also gives technical guidance to the manufacturers in processing, manufacturing and maintaining purity of products.

Central Electrical Testing Laboratory, Kakkalur

The laboratory aims at developing electrical industry in the State, particularly in the small scale sector. This laboratory functioning in the functional Industrial Estate at Kakkalur near Tiruvellore provides after production testing facilities for testing electrical goods like controls, appliances, switch gears, instruments etc. to see whether they confirm the standards of I.S.I. The institution also offer development and certification facilities.

Central Testing, Certification and Product Development of Laboratory, Adyar :

The Government have taken measures to develop electronic industry in the State in an organised manner and to achieve this objective at a faster rate, the functional industrial estate for electronics known as Dr. Vikram Sarabhai Instronics Estate was set up in Adyar.

In order to provide testing facilities in certification and product development, a fully equipped modern laboratory involving a cost of Rs. 35.00 lakhs has been set up with the assistance of the Government of India. Testing facilities for electronic units, components, entertainment equiaments and systems, product development advice and mobile testing facilities are available.

This will provide a fillip for the development of electronics and instrumentation industry in Tamil Nadu.

Small Industries Service Institute, Madras

The laboratory attached to this Institution is capable of undertaking volumetric and gravimetric analysis for electroplating solutions, simple chemical formulas, plasticity of clays, tensile crushing and thermal expansion of ceramic bodies, hardness, tensile and compression strength of mechanical products.

Training and Servicing Facilities

Technical Information Service

With the process of industrialisation having gained momentum and more and more people having come forward to start industries, there arose the need for an institution which can furnish information on basic aspects like the procedures and formalities involved in setting up the industries. The know-how developed research and development should be chanalised through an appropriate organisation in a systematic way to provide the necessary base for the growth of industries.

The Department thus lays great emphasis on the dissemination of information through a network of Technical Information Sections with Libraries. These units with their libraries cater to the needs of readers seeking advanced information in the

field of engineering and technology. They have created potential interest for the enterprising industrialists and the prospective entrepreneurs. They select, acquire and store, technical journals, books, specifications, research reports etc and abstract and index information of interest to the industrialists and entrepreneurs. The most important of them is the section at Guindy which was established in 1958. At the end of 1967, there were 2,355 technical books which rose to 3,961 in 1974. Here, documentation facilities are made available through which the proliferating ideas particularly these embodied in the technical documents are brought within the reach of technical personnel and others. During 1974, 21,800 readers have utilised the library.

With a view to serve the information needs of the industries located in the belt area of Madras city, particularly in and around the Industrial Estate, Ambattur, another technical information section with library was set up in 1970. This section offers reference facilities to the industrialists in the area where a large number of small, medium and large industries are located.

In Tamil Nadu similar sections are functioning at Pettai and Madurai and three more units are being set up at Salem, Tiruchirapalli and Coimbatore for the benefit of the industrialists and entrepreneurs.

Technical Training Centre, Guindy :

With a view to impart specialised training to Degree and Diploma holders in engineering and Industrial Training Institute trained candidates in die design, die sinking, tool making, forge and heat treatment and machine Operatives, a Technical Training Centre at Guindy was set up during the third plan period.

The degree holders are paid a stipend of Rs. 200 p.m., the diploma holders Rs. 125/- p.m. and Industrial Training Institute trained students Rs. 75/- p.m. The duration of training is 12 months for the course in Tool and Die Design and 18 months for others and every year 60 candidates are being trained.

In order to keep pace with the advancement of science and technology, a scheme for expansion at a cost of Rs. 22.35 lakhs was sanctioned under the Fourth Five Year Plan to provide training in new branches such as Electronic Instrumentation, Rubber Technology and Refrigeration.

It is not the quantitative but qualitative aspect that should stand first in any type of industry

These additional courses will definitely cater to the needs of modern requirements of industries, besides opening up new avenues of employment to the engineering personnel.

Tool and Die Design Centre, Dindigul:

The Tool and Die Design Training Centre at Dindigul is yet another institution to import specialised training in the design and manufacture of tools and dies required for various Engineering Units, particularly in the manufacture of locks.

The centre was set up during Third Plan period. The trainees are paid a stipend of Rs. 50 p.m. The duration of training is 3 years. The strength of the trainees has been increased from 45 to 90 and the training period reduced from 5 to 3 years. So far, 92 candidates have been trained.

Electro-Medical Equipment Cell, Guindy :

A Central Service and Repair Cell for electro-medical equipments maintained in the Animal Husbandry Department and Public Health Department clinics was set up at Guindy during March, 1967. The Centre undertakes servicing and repairing of electro-medical equipments.

The equipments for repairing and servicing were received in large numbers and as the Centre could not cope up with the work, two sub-centres, one at Madurai during December, 1967 and another at Thanjavur in May, 1971 were set up.

These three centres set up at a cost of about Rs. 16 lakhs, have so far serviced and repaired over 16,000 items of equipment from Medical, Veterinary and other institutions in the State and earned more than Rs. 15.50 lakhs. The Centres have built up good reputation for prompt and efficient service.

Technical Assistance in Rural Areas

The Government have sponsored many schemes to industrialise rural areas and to create an enthusiasm among the people in the rural areas. The setting up of projects in such backward areas are based on the viability of the project in helping, the people to improve their economic conditions. With this end in view, the Blacksmithy and Carpentry Unit was established at Arkonam which is a backward area, in December 1967 with the object

of renderinge srvice and production facilities to agriculturists, in and around these places with particular reference to agricultural implement. During the year 1970—71, the unit produced and sold goods worth Rs. 0.68 lakhs and Rs. 0.70 lakhs respectively which rose to Rs. 1.90 lakhs and Rs. 2.23 lakhs respectively during 1973—74. In 1974—75 (up to 31—10—1974) the value of production and sales amounted to Rs. 2.32 lakhs and Rs. 2.18 lakhs.

The three Basic Rural Service Centres, one at Tenkasi and two at Kila Ambasamudram in Tirunelveli district, set up about a decade ago, train candidates from Agricultural families in welding, fitting and turning. The duration of training is 18 months, 12 persons are trained in each centre in every year and they are paid a stipend of Rs. 30 p.m. These centres have so far trained 185 candidates.

Under Rural Industries Project Programme, several training schemes were started in the three project areas of Sriperumpudur, Omalur and Nanguneri, where about 1,500 candidates were trained in various trades like manufacture of bolts and nuts, leather goods, galvanising, gas and arc welding, radio craftsmanship, polythene bags, bell metalware, printing and allied trades, chalk crayon, servicing of sprayers and dusters etc.

Besides these, Common Facility Service Centres and Departmental Units were started with a view to create a bias for industries among the people in the area.

Technical Assistance by Industrial Development Organisations— Tamil Nadu Small Industries Development Corporation :

The Tamil Nadu Small Industries Development Corporation offers consultancy services to provide the interested entrepreneurs with project reports.

The Corporation assists the entrepreneurs for initiating feasibility studies for specific projects in the small scale sector. Under this scheme the entrepreneurs have to pay only a margin of 10 per cent of the cost of preparation of the feasibility report upto Rs. 10,000 and 20 per cent if the cost exceeds Rs. 10,000. The balance will be treated as subsidy.

Transforming Tamil Nadu to earn the name "Manchester" in the Industrial map of India

The educated unemployed including the Technocrats are given 100 per cent financial assistance for the purchase of machinery as well as construction of worksheds.

State Industries Promotion Corporation of Tamil Nadu

The State Industries Promotion Corporation of Tamil Nadu commissions feasibility studies to identify profitable projects and offers ready-made feasibility studies to prospective entrepreneurs at subsidised cost. The scheme envisages Corporation's contribution of 75 per cent for studies costing upto Rs. 20,000 and a sum of Rs. 15,000 plus 50 per cent of the cost of the study in excess of Rs. 20,000 in the case of studies costing over Rs. 20,000. After implementation of the project, the Corporation's contribution will be converted into share capital or term loan.

The products of medium and major industries in Tamil Nadu are given a price preference in Govt. purchases over the products of industries located in other States.

Tamil Nadu Industrial Investment Corporation

The Tamil Nadu Industrial Investment Corporation operates a scheme of assistance for import of machinery under the auspices of International Development Agency. The minimum assistance available to small scale industries is Rs. 10,000 and Rs. 2 lakhs (including rupee loan) for industries other than small scale industries. The maximum loan assistance that may be available for limited companies and Co-operatives is Rs. 20 lakhs and it is Rs. 15 lakhs in respect of proprietary and partnership concerns. The period of loan which bears an interest of 10.5 per cent per annum is 10 to 14 years including the initial moratorium.

These Institutions help to achieve the aims of nationalisation in industry, particularly in the small scale sector by coordinating the efforts of the producers and consumers by improved methods of processing the products.

Technical Assistance and know-how provided by the Government helps in the development of industrial economy and offers economically and technologically sound solutions. These facilities for small scale industries are absolutely essential to have an effective and scientific industrial growth.

TIDCO — A NAME IN PUBLIC SECTOR UNIT DEVOTED TO HELP LARGE SCALE INDUSTRIES

The Tamil Nadu Industrial Development Corporation Limited (TIDCO), a fully owned company of the Government of Tamil Nadu, was set up in 1965 with the object of establishing and administering large scale industries for accelerating the industrial development of the State of Tamil Nadu.

In pursuance of this objective, the Corporation has set up a cement factory at Alangulam near Rajapalayam and a Casting Steel Mill at Arkonam for the production of billets. Till the year 1968, the activities of the Corporation were only confined to the implementation of the above two projects in the public sector.

From 1968 onwards, the Corporation decided to expand its field of activities and applied to Govt. of India for a number of projects with a view to evolving an overall strategy for the rapid industrial development of the State, having regard to the existing and potential resources, the current and future demand trends and the special skills or advantages which exist or could be developed. It was in this context that the Corporation launched into the new concept of the Joint Sector as distinct from the Public or the Private Sectors, besides proposing several projects in the public sector and actually providing financial assistance to some of the existing units which were facing difficulties. **During the last 4 years, the Corporation initiated a crash programme of implementing 37 projects as a result of which, the Vth Five Year Plan period would witness TIDCO's further coverage of gaps in the fields of petrochemical, pharmaceutical and several other chemical projects, steel castings, sponge iron, scooters, leather tannery, refractories, rayon-grade pulp, fishing trawlers etc. The ultimate objectives of this challenging efforts are to bridge the industrial gap in the State, decentralise industrial location, ensure balanced economic development, encourage idle capital into use and bring together professional managers and new entrepreneurs who may need management expertise.**

Work of TIDCO

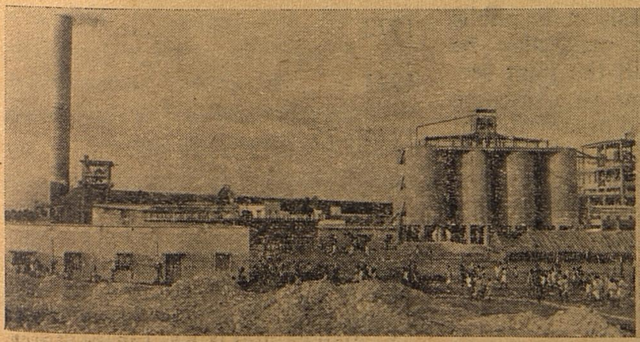
With wide contacts that have been established within the country and abroad, TIDCO provides assistance to its joint sector associates in obtaining foreign collaboration from competent parties and also in the negotiation and conclusion of foreign collaboration agreements. TIDCO also renders specialised assistance in documentation of projects, negotiations with financial institutions and banks for underwriting of share capital and for sanction of term loans. TIDCO offers effective liaison to its partners in expenditing and securing clearances of licences and permits during project implementation. Its project cell maintains an intimate and continuous dialogue with the Ministries and Departments of the Government of India and State Governments and TIDCO has Liaison Office in New Delhi. TIDCO also provides assistance in preparation of feasibility reports, selection of suitable sites and obtaining power and water respectively from the Electricity and Water Supply Boards in Tamil Nadu.

CAPITAL STRUCTURE

The Corporation was incorporated with an " Authorised Capital " of Rs. 10 crores on 21—5—1965 which has since been increased to Rs. 15 crores. The paid—up capital of TIDCO as on 31—12—1974 is Rs. 11.92 crores.

The present capital structure as on 31—12—1974 of the Corporation comprises of :—

S. No.	*Particulars*	*Rs. in Lakhs.*
1.	Paid-up Capital	1,191.74
2.	Debentures	405.00
3.	Loans from Govt. of Tamil Nadu inclusive of interest accrued upto 31—3—74 and Ways & Means Advance of Rs. 200 lakhs	787.15
4.	Fixed Deposit	85.69
	Total ..	2,469.58



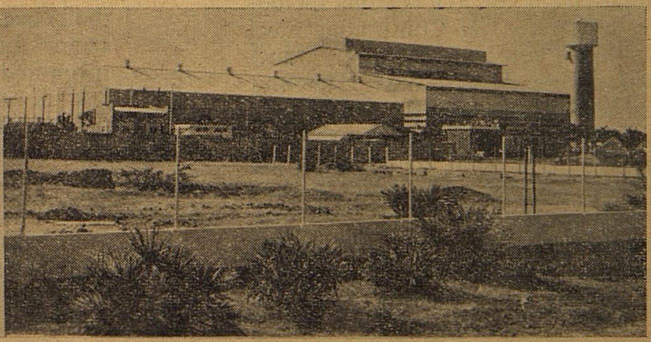


PHOTO LEFT : Aerial view of Cement factory at Alangulam.
,, RIGHT : Factory view of the Continuous Steel Casting Mills, Arkonam.

INVESTMENT

The Corporation has so far invested in Tamil Nadu Cements and Tamil Nadu Steels Rs. 597.27 lakhs and Rs. 747.16 lakhs respectively. Besides, it has invested Rs.500 lakhs towards share contribution in one of the major joint sector company *viz.*, M/s. Southern Petrochemical Industries Corporation Limited. The investment in other companies as on 31—12—1974 works out to Rs. 143.33 lakhs. In addition, the Corporation has rendered financial assistance to companies by way of loans to the extent of Rs. 64.77 lakhs. Further, the Corporation has furnished guarantees to various companies for a sum of Rs. 4,024.00 lakhs.

PUBLIC SECTOR UNITS

Projects Implemented

(1) *Tamil Nad Cements*

(*a*) **Working Results :** This unit started its commercial production during May, 1970. It provides employment for 1,430 persons including officers. Due to acute shortage of power and coal, the unit has worked during 1973—74 only 70.03% as against 73.38 %in 1972—73 of its total installed capacity. But for the power cut and inadequate and irregular coal supplies, the plant would have operated over 80% of its capacity.

(*b*) **Expansion Scheme :** The installed capacity of 4 lakhs tonnes per annum is proposed to be expended by converting the wet process kilns into dry process kilns. A new cement plant at Ariyalur is also being planned.

(2) *Tamil Nadu Steels, Arkonam*

(*a*) **Working Results :** It provides employment for 571 persons including officers. The Continuous Steel Casting Plant commenced production during April, 1972. The unit had made a profit of Rs. 12.34 lakhs during 1973—74 as against the loss of Rs. 76.96 lakhs incurred during 1972—73. The unit could have produced more and achieved better results but for the heavy power cut resulting in shutdown of the plant completely upto 30—6—1973.

(*b*) **Diversification :** The Corporation has proposals to diversify the activities of Tamil Nadu Steel, Arkonam. TIDCO is also planning to develop an industrial complex based on a steel foundry at Arkonam.

JOINT SECTOR

Joint Sector Concept : The concept of joint sector is of recent origin. Its greatest merit lies in its attempt at harmonious blending of the dynamism and industrial leadership of the private enterpreneur with the socialistic policies of the Government with a view to making the best use of the natural and huamn resources available for the industrial development of the State.

New entrepreneurs are invited to set up industries with professional Management and the backing of the State which goes a long way in attracting assistance from financial institutions. **The State's participation in the Joint Sector is expected to encourage rational fiscal pricing and employment policies consistent with the social objectives of the Government. Based on the guidelines laid down by the Govt. of India, TIDCO contributes 26% of the equity capital, the private entrepreneur 25% and the balance of the equity requirements are open for public subscription.**

Choice of projects in the Joint Sector

TIDCO has attempted to adopt rational criteria in the choice of projects for implementation in the joint sector with particular reference to :—

(*i*) the exploitation of raw materials and minerals available in the State ;

(*ii*) the promotion of key industries which could normally be set up in the public sector but may also be promoted in the joint sector in order to overcome financial and organisational constraints, so as to fill up the industrial gaps in the State ;

(*iii*) the development of backward areas ;

(*iv*) the demands for an essential commodity/product within the State ; and

(*v*) the manufacture of export-oriented products which could earn foreign exchange.

Inter-relationships exist between some of the projects like Soda Ash and Ammonium Chloride, Pottassium Chlorate and Caustic Soda which are assured of the required raw materials from other joint sector projects like SPIC and Marthi Crystal Salt Company Limited. The Cigarette project would give a fillip to the agricultural economy in the backward district of Dharmapuri where there is scope for tobacco cultivation.

The finished Leather and the Electronics projects promoted by the Corporation are concrete examples of 100% export-oriented projects which are bound to earn foreign exchange and the first of which also utilises a staple raw material of this State. TIDCO has also chosen such chemical industries which could supply the essential raw materials to meet the demands from Tanneries, Match Industries, Pharmaceuticals, Textiles, Paper, Glass and allied industries within the State.

Joint Sector Companies incorporated

(*a*) Twenty companies have been incorporated in the joint sector as on 31—3—1975 as furnished below yearwise :—

Year		*No. of Companies*
1969	..	1
1970	..	Nil
1971	..	2
1972	..	5
1973	..	7
1974—75	..	5
		20

The total outlay on these projects is Rs. 185 crores of which the equity capital is Rs. 48.50 crores and loan capital is Rs. 136.50 crores. TIDCO would contribute Rs. 13 crores towards equity capital.

(*b*) Out of twenty companies floated by the Corporation so far, the following nine companies are expected to commence production during the year 1975.

1. Southern Petrochemical Industries Corporation Limited

2. Tamil Nadu Chromates & Chemicals Ltd

3. Southern Boraax Limited

4. Pandian Chemicals Limited

5. Dynavision Limited

6. Marthi Crystal Salt Company Limited

7. Asia Tobacco Company Limited

8. Tamil Nadu Alkaline Batteries Limited

9. Arkonam Castings & Forgings Limited

These apart, Tamil Nadu Dadha Pharmaceuticals Ltd., which is an existing company taken over by TIDCO, is in full production and its expansion programme is expected to be implemented shortly. The rest of the ten companies are expected to commence production either during the year 1976 or early 1977.

Projects under implementation

The Corporation is taking active steps to implement 11 more projects in the Joint Sector.

A review of the activities of TIDCO during the Fourth Plan period will indicate that there has been a steady growth rate in the promotion of several industries both in the public and the joint sectors. TIDCO could take legitimate pride in its active involvement in the promotion of 43 projects (37 projects on hand and 6 other projects for which letters of intent are awaited) and more of them are expected to go on stream by the end of the Fifth Five Year Plan. The total capital outlay of the 37 projects on hand in the public and joint sectors is expected to be in the order of Rs. 340.00 crores and TIDCO will contribute Rs. 46.5 crores as equity capital.

The project implemented in the Joint Sector will create direct employment potential for over 11,500 persons, and the six public sector projects which are implemented and are under implementation will create employment potential for over 5,500 persons. What is also important is the large number of ancillary industries likely to spring up as a result of this mammoth effort and the consequent scope for additional indirect employment.

TIDCO has thus established itself as a live-force in implementing Government's policies projected towards socio-economic benefits for the common man by contributing to the economic growth of the State through the medium of large and medium scale industries. It has been acknowledged as an efficient organisation both at home and abroad. Although its achievements have been mo dest till date,the coming years should see it forge ahead towards achieving its laudable objectives.

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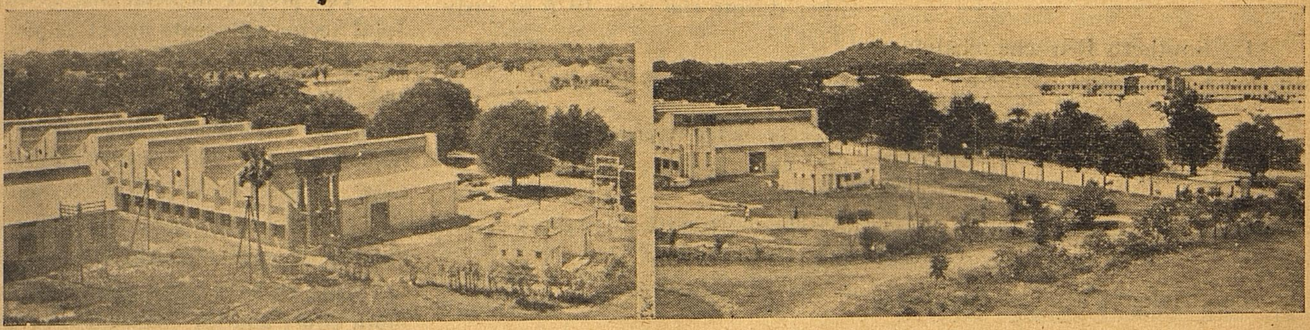
INDUSTRIAL CO-OPERATIVES FOR COIR WORKERS

For the development of coir industry in the State the Government have so far organised 25 industrial co-operatives for coir workers and have also set up two departmental units, viz., a coir school and a pilot plant for mattresses and bristle fibre. The coir school at Eathamozhi in Kanyakumari district was set up in November 1961 for imparting training to students in coir yarn spinning and manufacture of coir products. The training scheme was discontinued from 15th February 1972 as the response for the training programme was poor. The Central Coir Industrial Co-operative Socirty at Tirunelveli has taken over the school to run it on lease basis.

Under the comprehensive scheme for development of mechanised coir industy, financial assistance is provided to the prospective entrepreneurs to set up Mechanised Coir Units. A provision of Rs. 2 lakhs was made for this purpose for the districts other than Thanjavur district in the year 1974-75, and a provision of Rs. 1 lakhs has been made for 1975-76.

For entrepreneurs in Thanjavur district, loans for setting up mechanised coir units are being granted under the State Aid to. Industries Act. During the year 1975-76 it is proposed to provide financial assistance to the extent of Rs. 42,000 to the Kollancode Coir Workers Industrial Co-operative Society for extraction of coconut fibre and Rs. 55,000 to the Kanyakumari District Central Marketing Industrial Co-operative Society for setting up a production unit.

A BIG UMBRELLA FOR SMALL INDUSTRIES



Panoramic view of Guindy Industrial Estate with its mushroom growth of industries.

The Tamil Nadu Small Industries Development Corporation Ltd., (SIDCO), an undertaking of the Government of Tamil Nadu, was established during the year 1970 with a view to assist and develop small scale industries in the State. Primarily a service organisation, SIDCO helps the small industrialists in almost all facets of their industrial career. The main objectives of the Corporation are :—

Procurement and equitable distribution of scarce raw materials required by SSI Units;

Supply of machinery required by small industries on hire purchase basis;

Construction of worksheds and making them available to industries on hire purchase basis;

Offer of Technical Consultancy and preparation of Technical Feasibility Reports for new projects;

Offer of marketing assistance and

Consolidation of import licences of small scale industries and effecting bulk import against them and promotion of exports.

Procurement and distribution of raw materials and procedure to apply for assistance

In respect of all items of indigenously procured iron and steel items, SIDCO plans the State requirement of SSI units on the Joint Plant Committee. The iron and steel materials received as per Joint Plant Committee allocation as well as materials procured from the producers' stockyards (HSL and TATA's) are distributed to the SSI Units, registered with SIDCO for iron and steel, as industrial raw material. The distribution is on rotation basis depending on the availability of material with SIDCO. In addition to the rotational release, ad hoc releases are made to SSI units to facilitate execution of firm orders received by them. In respect of other raw materials like Zinc, Mutton Tallow, Palm Oil, Caustic Soda, Potasium Chlorate, Coke and Coal, the raw materials are procured by SIDCO and released to SSI units on the basis of allocation made by the Director of Industries and Commerce.

How to Apply ?

(*a*) For the registration of iron and steel demand with SIDCO, the small scale industries should apply in prescribed form costing Rs. 1.50 which is available in all SIDCO's Offices. It is adequate if the details requested for in the application form alone are furnished along with the attested copy of the SSI Certificate.

(*b*) In respect of application for ad hoc releases, the SSI units should apply in ordinary letter form along with following enclosures :

(*i*) Order received from Government Departments, Quasi Government Institutions or reputed firm (attested copy to be sent).

(*ii*) S.S.I. Certificate (attested copy to be sent).

(*iii*) Sanctioned sketch of the article proposed to be manufactured.

(*iv*) Essential raw material requirement with reference to sketch etc.

Imported raw materials and arrangement made by SIDCO for procurement of the materials

SIDCO entered into an agreement with the State Trading Corporation for import of 25 tons of Potassium Chlorate and distributed it to small scale match units. Similar agreements with the State Trading Corporation are being negotiated for import of other scarce raw materials like Endrine, Mutton Tallow, Palm Oil, etc.

To assist the small scale entrepreneurs in exporting their products, the Small Industries Development Corporation has started operating its own IRMAC (Industrial Raw Material Assistance Centre) scheme under which the Corporation receives import licences for Rs. 10 lakhs from rupee payment area on a replenishment basis. On this basis, it can import essential raw materials required by small scale industries which are export-oriented and be in a position to supply these raw materials to the units.

Achievements

The following figures show the year-wise achievement of SIDCO under the Raw Material Distribution Programme as shown in the next page.

Year	*Value of Raw Materials distributed (Rs. in lakhs)*
October 1970 to March 1971 (5.5 months) ..	106.58
1971—72	379.20
1972—73	417.90
1973—74	576.10
April 1974 to December, 74 (9 months)	602.43
	2,082.21

Hire Purchase Scheme of SIDCO for machinery and tie-up arrangements with TIIC

Under the Hire Purchase Scheme (Machinery) upto 31-3-'74 SIDCO assisted 1,135 entrepreneurs for the purchase of machinery required by them to the extent of nearly Rs. 5 crores. With effect from 1—4—74 SIDCO has introduced a consortium scheme in collaboration with the Tamil Nadu Industrial Investment Corporation to assist the small scale industries for purchase of machinery and for construction of sheds on the lands owned by the entrepreneurs.

Special features of the Scheme and procedure to apply for assistance

Under the Scheme, entrepreneurs are given assistance upto 90% of the value of land, building and machinery and the balance has to be met by the entrepreneurs as margin money. The maximum assistance rendered will be Rs. 7.5 lakhs and this will be enhanced to Rs. 10.00 lakhs in respect of sophisticated industries. Interest is charged at the rate of 9.5% for backward areas and 10.5% for other areas. Repayment is over a period of 6 years after a moratorium of one year.

Simplified application forms for assistance upto Rs. 3.00 lakhs can be had on payment of Rs. 2.00 from the Central Office or from any of the Branch Offices of SIDCO at Vellore, Tiruchy, Thanjavur, Pudukkottai, Coimbatore, Madurai, Ramanathapuram (at Madurai) and Tirunelveli. In respect of assistance for above Rs. 3.00 lakhs, the application form prescribed by TIIC should be adopted.

The yearwise achievement of SIDCO under the Hire Purchase Scheme is indicated below :

	14-10-70 *to* 31-3-71	1-4-71 *to* 31-3-72	1-4-72 *to* 31-3-73	1-4-73 *to* 31-3-74	1-4-74 *to* 31-12-74
			(*Rs. in lakhs*)		
No. of persons benefitted	11	154	401	569	127?
Value of assistance rendered	7.62	75.91	173.11	232.76	187.23

Workshed Scheme of SIDCO

The following two schemes have been introduced by SIDCO for the construction of worksheds :—

(*i*) Construction of worksheds by SIDCO in its own land according to the needs of the entrepreneurs identified beforehand.

(*ii*) Assisting entrepreneurs who proposes to construct worksheds in their own lands.

Achievements of SIDCO :

SIDCO so far has established work-sheds at Industrial Estates at Ambattur, Kurichi, Thiruverambur and Ranipet. At Ambattur, 89 sheds have been constructed in three phases at an estimated cost of Rs. 62 lakhs and fourth phase construction of 25 sheds at an estimated cost of Rs. 27 lakhs has been undertaken. At Thiruverambur, Tiruchy, 12 sheds at an estimated cost of Rs. 24 lakhs is under completion. At Kurichi, 26 sheds at an estimated cost of Rs. 16.14 lakhs have been completed. At Ranipet 12 sheds at an estimated cost of Rs. 10.50 lakhs has been undertaken for construction. Second phase programme is under progress.

In respect of lands owned by the entrepreneurs SIDCO has assisted 127 cases involving an amount of Rs. 88.99 lakhs.

Development of Backward Areas and Subsidy Scheme

Under the Government of India's outright Grant of Subsidy Scheme, new industrial units to be set up in any one of the 27 identified backward areas in Tamil Nadu will be given an Outright Grant or Subsidy equivalent to 15% of Fixed Capital Investment. The existing units which propose to expand its activities are also eligible for the subsidy. Application forms and details as far as it relates to small scale industries, can be had from the concerned Assistant Development Officers of SIDCO.

Concessions to educated unemployed and technocrats

SIDCO has assisted 305 educated unemployed persons for purchase of machinery and for construction of worksheds which includes 251 Technocrats. The special feature of the hire purchase scheme for educated unemployed including technocrats is that, they are given 100% financial assistance for purchase of machinery as well as for construction of worksheds. The payment of margin money is waived in their cases.

By implementing the various self-employment schemes, SIDCO has generated employment opportunities to nearly 1,642 entrepreneurs, who in turn have provided employment opportunity to more than 15,000 persons throughout the State.

LOW IN CAPTIAL NEEDS AND HIGH IN LABOUR NEEDS ELECTRONICS INDUSTRY IS A BOON TO TAMIL NADU

Electronics industry, which is one of the important sophisticated science-based industry, is unique in being highly employment intensive. **In this industry, the investment per worker is far below the level of average turnover per person who is directly involved in production. Hence, the relatively smaller outlay in fixed assets per worker will enable a larger generation of employment.**

Electronics industry was in a rudimentary stage about two decades ago. The domestic radio receiver industry was growing up and this industry was thriving with imported components and borrowed technical know-how. The number of trained personnel in the fields of Electronics and Communication Engineering was also comparatively small. The research and development effort was at low ebb.

During the last twenty years, a number of research laboratories and institutions in the field of electronics were established and the performances of research and development were set in motion. With the formation of commercial organisations like the Electronics Corporation of India, activities in the areas of design and development of medical electronics equipment, professional grade electronic components, control devices and electronic computers were expanded and diversified.

Growth of Electronics Industries in Tamil Nadu

Tamil Nadu had not made much headway in the development of electronics industries. The first impact of electronics was on the domestic radio receiver which has taken roots. Till about the end of 1965, the Electronics Units in Tamil Nadu were mostly confining to entertainment equipments, particularly assembly and repair of radio receivers and amplifiers. In 1962, one unit was set up for manufacturing carbon track volume controls and another unit was set up in 1969. In the large scale sector, two units manufacture sophisticated and specialised electronic instruments like power supplies, signal generators, etc.

In Tamil Nadu there were 128 units manufacturing radio receivers, amplifiers etc., instruments, components and auxiliaries and out of these, 125 units were in the small scale sector. A team of highly qualified technocrats had developed a number of small scale units for the manufacture of essential components like, resistors and capacitors, instruments and sub-systems like process controls of very good quality. Besides the above units in the private sector, the signal telecommunication workshops of the Southern Railway and the Police Radio unit in Madras had developed a few professional equipments like Microwave Transmitting Units and V.H.F. Communication Units intended for their respective fields.

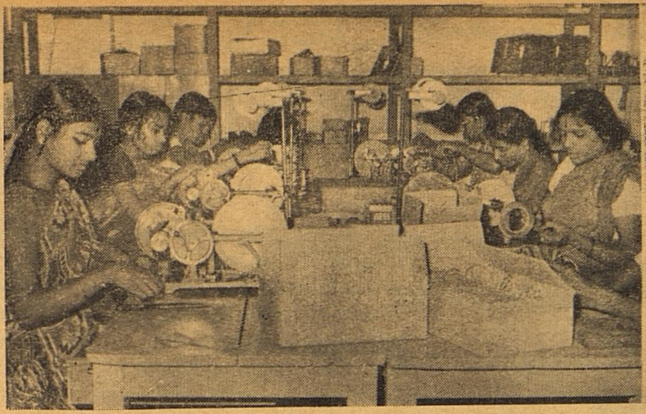
Electronic Components

In Tamil Nadu, the present production of components and primary materials are negligible. Three or four units which were set up in 1969—70 are now producing electronic components like volume controls. Another unit is manufacturing basic components like resistors and capacitors in the private sector.

Functional Industrial Estate, Adayar, Madras

Tamil Nadu with its abundant manpower and skill eminently suited

Photographs show ladies engaged in the task of transistor repairing and ampere testing.



Photographs show men and women engaged in the work of assembling and winding sophisticated electronics tapes at an electronics industry.

for sophisticated industries offers a good scope for a variety of electronics items both as original equipments and ancillaries for the larger units like Indian Telephone Industries, Bharat Electronics and Electronics Corporation of India.

As a first step towards creating a suitable climate and infrastructural facility for developing this industry, the Vikram Sarabhai Functional Industrial Estate for electronics and instruments has been set up by the Government of Tamil Nadu. The estate which is located in the CSIR Complex is surrounded by the higher technological institutions like the Indian Institute of Technology and the College of Engineering with whom testing and development facilities are available.

The Estate which was set up during the Annual Plan Period (1966—1969) in a site free from radio interference, vibration and dust, had started functioning in its first phase with 29 large size units. Eight small units are being constructed and a few more units will come up soon. The total investment on this estate is Rs. 45.00 lakhs and ultimately, the estate will have well-designed factory units to have electronic and instruments industries.

In this estate, industrual process controls reflection components for television receivers, linearity controls, wire wound resistors, car radios special electronic instrument, industrial thermometers, miniature lamps and glass instruments.

The car manufactured in this estate are exported to United Kingdom and other countries.

The estate provides direct employment to 300 persons and indirectly to 1,000 persons. The ultimate employment potential in the next 5 years would be 4,500.

The complex is only about 4 miles from the Airport and possibilities of setting up of a duty-free zone for airlifted components are also bright.

Promotional resources

The Government of Tamil Nadu have taken up several measures to develop the electronics industry. The schemes formulated under this programme include setting up of estates in other parts of the State, provision of testing facilities, product development and establishment of a data bank.

Electrical and Electronics Estate, Salem

The establishment of Salem Plant and the adjunct Housing Schemes provide immence possibilities for the setting up of a functional industrial estate for electrical and electronics industries at Salem and this will give a boost for the development of electronics industries in the industrially backward areas. The estate which will be located near Salem Steel Plant will have about 15 'L' type factory sheds in the beginning, besides a common service facility centre. The scheme is under implementation.

Special Electrical Ancillary and Instruments Estate, Hosur

With a view to feed the major industries like the Indian Telephone Industries, Bharat Electronics Limited, Hindustan Aeronautics etc. a special estate is being set up at Hosur which is an industrially backward area. The estate will cover an area of 5 acres with 4 'L' type terraced and 4 flatted 'L' type sheds and a common facility service centre.

Functional Developed Estate for Electrical, Electronics and Instrument Industries, Madras

The Government have taken active steps to set up an estate for the manufacture of electrical goods, electronic components, systems and instruments, on the Mahabalipuram Road on an extent of about 100 acres of land. The scheme is in the initial stage of implementation.

The existing Electrical Industrial Estate at Kakkalur and the fast developing Ancillary Industrial Estate at Madras and the Electrical Consumer Goods Industrial Estate at Tiruchirapalli will offer ample scope for the development of electronics ancillary industries in the State.

The Central Electronics Testing Laboratory, Adyar

In order to make available testing facilities, a centralised Testing, Certification and Product Development Laboratory at a cost of Rs. 35.00 lakhs has been set up at the Dr. Vikram Sarabhai Instronics Estate with testing facilities for components, entertainment equipments and systems manufactured by the electronics units. The product development advice and mobile testing facilities will be provided in this laboratory which will be commissioned by the middle of 1975.

MORE SCOPE FOR SMALL SCALE SECTOR IN ELECTRONICS INDUSTRIES

Testing, certification and product development laboratory for Electronics at Madurai

A laboratory for testing, certification and product development for electronics is being set up at Madurai at a cost of about Rs. 7.25 lakhs. The project will provide after production, testing, certification and product development facilities in conformity with prevailing standards.

Data Bank for Electrical and Electronics Industry, Adyar

The process of dissemination of information is an important feature of modern technological development. A Data Bank for collection of information on electrical, electronics and instrumentation industries in the State has been set up at the Instronics Campus to serve as a clearing house of information for planning raw materials and infrastructure facilities to the sophisticated industries. In the collection and dissemination of information on the latest techniques, product development, procedural matters etc., this institution maintains close liaison with the Electronics Commission, Higher Technological Institutions, National Laboratories and financing institutions.

Scope for the Development of Electronics Industry

With a view to supply special bodies for manufacture of ceramics for Electronics Industries, the Government is setting up a service centre for electronics ceramics in the Ceramics Complex at Vridhachalam. This unit has a very important role to play in providing the required sturcture to the sophisticated branch of electronics industry.

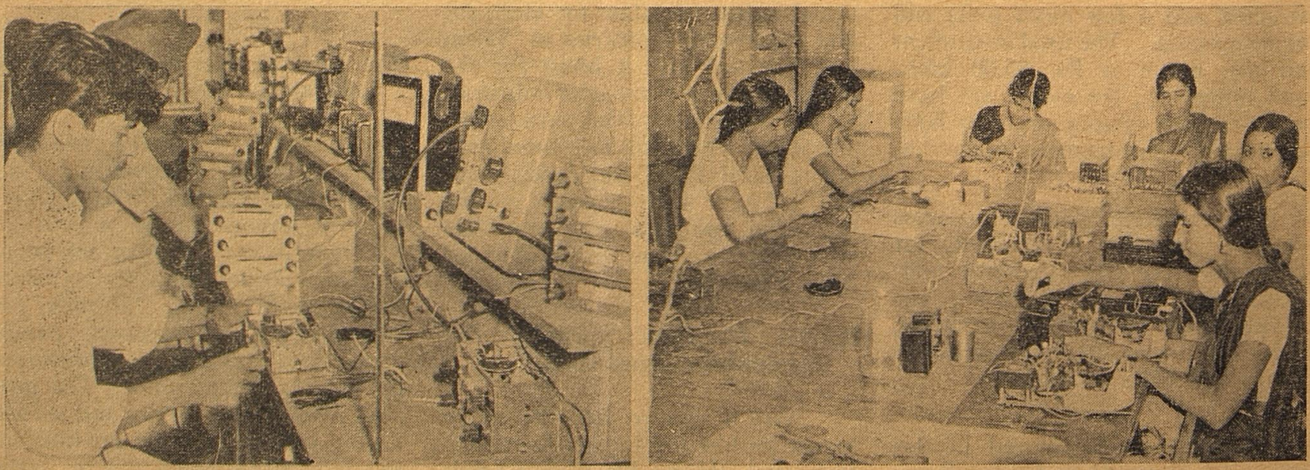
The Central Electro-Chemical Research Institute, Karaikudi, which is a National Laboratory, offers process and development facilities and the small scale sector could make use of these facilities to a great extent.

Madras is expected to be hooked into the country's television network shortly and this will not only give rise to a demand for T.V. receivers but also create a large number of servicing and repair units. The small scale sector is bound to get its due place in the capacities to be created.

There exists much scope for setting up electronics industries for the manufacture of solid state devices, minidigital computers, integrated circuits, telephone receivers etc. The Babha Committee had estimated the need for Electronic Industries in India at Rs. 1,650 crores till 1975—76 and as it is. the share of Tamil Nadu could easily be about Rs. 165 crores.

A special Working Group consisting of Technical Experts went into the question of exploring further scope for the industry in Tamil Nadu. This Group have identified 24 items of electronic components, 17 items of medical electronics and 6 items of entertainment equipments.

The Electronics industry has a great future in Tamil Nadu and in the next two plan periods high priority may have to be accorded for the development of industrial units which will not only manufacture radio receivers etc., but also telecommunication equipments etc. Tamil Nadu is ideally suited for this purpose as its manpower can usefully harness for undertaking skilled jobs.



Amplifiers in the process of assemblege and testing.

WHY STUDENTS' PARTICIPATION IN THE UNIVERSITY ADMINISTRATION STRESSED?

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WILL IT FULFIL THE EXPECTED OBJECT ?

As Pandit Jawaharlal Nehru once observed, " A University stands for humanism, for tolerance, for reason, for the adventure of ideas and for the search for truth. It stands for the onward march of the human race towards even higher objectives. If the Universities discharge their duties adequately, then, it is well with the nation and with the people." This statement, I should say, crisply defines the goal or purpose of University education. In the attainment of this goal, the main functions of a University have been or appear to have been pursuit of excellence in knowledge, rigorous adherence to truth, cultivation of a sense of objectivity and university, and readiness to give and take blame or praise through the instrumentality of the dialogue. But these have taken on new dimensions in the context of startling social changes and pressing national needs which compel our attention to-day. The University cannot any longer be stand-office without any concern for the community which is seeking to establish a new order which can ensure not only political freedom but also economic and social equity and equality.

Recommendations putforth by Kothari Education Commission

As emphasised by the Kothari Education Commission, University education needs to keep in perspective the three vital obligations which have to-day devolved on it, *viz.*, (*i*) internal transformation so as to relate it to the life, needs and aspirations of the nation ; (2) qualitative improvement so that the standards achieved are adequate, keep continually rising, and atleast in a few sectors, become internationally comparable and (3) expansion of education facilities broadly on the basis of manpower needs with an accent on equalisation of educational opportunities. But the question is : has the existing educational system prepared itself for discharging these obligations efficiently and effectively? Unfortunately there still continues a wide gap between its content and purposes on the one hand and the concerns of national development on the other. This hiatus has naturally given rise to the present crisis with its attendant consequences which are most disturbing and even dismaying. This crisis is getting to be worse because of several contributory factors. Foremost among these factors is the quantitative expansion of the University world.

Incredible growth in demand for College studies

The phenomenal " Expansion of Numbers " has placed our colleges and universities under a severe stress and strain unknown in our country's long history. In 1947 there were 3.5 lakhs of students in 2,014 colleges and 20 universities. But to-day the number of students has sky-rocketed to nearly 35 lakhs in about 3,700 colleges and 100 universities. This astounding expansion is due to the quick and daring response of universities to the exploding demand for higher education which free India, amidst a revolution of rising expectations, has generated in its millions. Particularly with the stunning population bulge that our country has ushered in and with the cry of democratisation of education rending the air, those to whom higher education had been denied in the past, namely our Scheduled Castes and Backward Classes, have necessarily to be given facilities andencouragement to receive the benefits of higher education on an unprecedented scale. But this staggering rise in enrolment has called for an augmentation of our resources which unfortunately has not been possible because of the pedestrian growth of our economy.

By
THIRU. S. V. CHITTIBABU,
Vice-Chancellor,
Madurai University.

Growing communication gap between teachers and students

It is a tragic spectacle that we witness to-day in our colleges and universities with their overcrowded classrooms, ill-equipped libraries and laboratories, scanty hostel facilities, inadequate and sometimes non-student services and above all a depressing atmosphere in which there is very little communication between teachers and students. The situation has become hopeless and desperate to students who find their apathetic, if not antipathetic, little interested in their work, lacking the motivation needed to make their teaching lively and inspirational. The Central Advisory Board of Education laments thus : " We do not have in adequate numbers the right type of teachers who have their commitment to education, to the pursuit of truth and excellence, to their professions, to their students and to basic human values." **The frustration of the student has become all the greater because of the outmoded courses of study with their unimaginative curricula taught in a dull and dreary manner by ill-equipped teachers.** Further more with the present incredible explosion of knowledge and with the fantastically new information and communication systems with the computer and card selector dominating the scene the basic challenge posed is, who is to communicate, what to communicate, to whom and how. No longer can even the best of teachers " stand apart and alone on his Olympian heights " and presume to pour forth precious words of wisdom in solitary splendour.

Shortcomings of our present examination system

Then comes the havoc wrought by the present examination system with its crippling stress on memorisation rather than on capacity for critical thinking, innovation and application of the knowledge acquired. Getting a job is linked up with passing is the examination and it is this that causes considerable anxiety to the student who has apprehensions about coming through the inquisition unseathed in case questions are tough or unexpected. The fear of unemployment foments prejudice and hatred towards the entire tribe of examiners and the heartless examination system.

University autonomy—not a legal concept

So then, to step up the quality of instruction as well as to make it socially relevant and meaningful, there should be an in-built nexus between university education and the problems of life and society. The University cannot remain as an ivory tower tenanted by doctrinaire academies. The organisational set-up of the University should on the one hand discountenance the growth of an academic elite buttressed by rules-ridden administrators and on the other, promote a rapport between the university and the various sections of national life and economy. This is by no means an easy task. But the challenge has to be met by continually reviewing, modifying and adjusting the pattern of university organisation and administration. The report of the Gajendragadkar Committee set up in 1971 has rightly called for the immediate abandonment by universities of the inflexibility or rigidity of their administrative framework and the adoption of flexibility and capacity for change and experimentation. **It emphasises the need for autonomy in universities, while at the same time conceding the right of the community at large to make the universities responsive to the needs and requirements of the country.** University autonomy is not a legal concept ; not even a 'Constitutional concept.' It is an 'Ethical concept' and an 'academic concept.' And what is more, there are two aspects of university autonomy—(*i*) autonomy within a university and (*ii*) autonomy in relation to agencies and authorities external to it, the most important of which is the state.

Participation of students in the University Administration

Against this background it is necessary to take note of the fact that on the university campus teachers and students are co-partners in the great adventure of pursuit of truth and excellence. There can be no question of authoritarianism or bossism of the so-called 'senior members.' The functioning of the statutory and other bodies of a University must be untramelled by outdated and purposeless routine. On the contrary deliberations and discussions must be objectively critical and constructively helpful in reordering the scheme of things as warranted by the needs of circumstances. In this context, naturally, **participation of students in university administration has to be welcomed as a "necessary concomitant of university economy." But then the object of student participation is to contribute to the enrichment of university education.** There can be no room therefore for an "power politics" or "opposition complexes" in the corporate life of a university, the constituents of which comprise administrators, departmental heads, deans of faculties, teachers and students.

Report of Gajendragadkar Committee

Discussing the question of participation of the student in the administration of universities the Gajendra Gadkar Committee carefully examined such important aspects of the issue as : What should be the level of participation ? Should it be advisory and consultative or decisive ? Should students be full members of the authorities of the University ? What should be the nature of student representation ? By way of answering those questions the considered views of the Committee set out in the report are that **atudents should have the opportunity to pay a leading role in the organisation of the corporate life of the University, particularly extra and co-curricular activities. The teachers may guide and advise them in such matters but the decision-making should as far as possible be the responsibility of students. The students should also be encouraged to give their thought to such matters as the restructuring of courses of study, the enrichment of the content of curriculum and instructional methodology and examination reform.** Through a suitable machinery of consultation students should be exposed to the broad administrative problems encountered by the university, including its budget and finances by being given representation on the Senate or the Court which is the highest policy-making body in the University set-up. **Decentralisation of authority in all spheres of university activity is not only desirable but even necessary in the present context.**The logical corollary of this would be that all matters touching student welfare should not be dealt with at one level only, as for example solely by the representatives of the students' union. Nevertheless the Students' Union should be encouraged in all ways to play a responsible role in the academic life of the university community. As stressed by the Kothari Education Commission, membership of the students' unions should be automatic in the sense that every student should be presumed to be its member. But every student should be expected to choose at least one activity organised in the institution, *e.g.*, Cultural Society, Cricket Club, Social Service League and pay the required subscription. The feeling is that it would be too soon to give students representation on the Syndicate, the functions of which include, inter alia, the appointment of teachers and examiners according to prescribed procedures. Let us take the first big step, namely, giving effective representation to students on the Senate, then observe how it works and then follow it up with other steps ultimately leading up to the full participation of students in the university administration.

Type of participation

Kerala and a few other States have already given the lead in this regard. It has been suggested that a Students' Council should be set up, charged with the responsibility of making its recommendations both to the Syndicate and the Academic Council in all matters concerning the interests of students. For each faculty, there can be a Student Advisory Committee which can express its views on the structure of courses, curricular and examination reform etc. Resources should be placed at the disposal of the Universities to provide the minimum facilities and amenities such as adequate hostel accommodation reasonably well-equipped libraries and laboratories, book banks, day students' homes, scholarships and free concessions, canteens, playgrounds etc. As regards the constitution of the University Students' Union, it is suggested that as not all the students could ipso facto become its regular members, the ultimate power of the union may be vested in a General Council or Parliament of, say, 100 members comprising elected representatives of departmental societies and/or faculties upto 75% of the remaining being those representing the Games Committee, the Cultural Committee, the Social Service Committee etc.

RICHES OF THE SEA IN DESALTING

by K. N. R. Rao

Conversion of sea water into fresh water has always excited the imagination of people all over the world for it opens up new vistas for humanity. India has one of the largest coastal developments and the problem of drinking water has been known to be acute in cities and parts of the country.

About 97 per cent of water which covers 72 per cent of the surface of the earth is salt water in the oceans. Another 2 per cent is in the form of Ice at the Poles and elsewhere and the balance of 1 per cent is what has to be conserved for man's daily use. Conservation and desalinisation are the two major means of utilising the world's water resources to the best effort.

That is why we have of late been hearing of attempts to apply these principles of Modern Industrial Technology to the conversion of the sea water into a potable condition at a commercially feasible cost.

It is reported that about a couple of hundred desalinisation plants are already at work all over the world. There has been extensive collaboration between industry and the atomic energy commission formed many years ago. The existing British Flash Distilation System and the latest British progress with the collaboration of Americans, the technology of Atomic Energy Authority who has undertaken responsibility for research in desalination named Clementive System, is also costly, and their capital realisation takes many years according to their scheme. The Soviet Union obtained magnesium, bromine and sodium sulphate from the sea water.

In the world's Ocean a mere 10,000 million tonnes of Gold is available according to the estimate calculated by the Soviet scientists. The amount of magnesium runs to several billion tonnes. The gold content is negligible compared to the said statement.

For 1,000 cubic meters of water, we throw away into the sea over 30,000 kgs. of valuable substance. Salt water must be utilised to the full as per this scheme :

In the process of desalinisation recovery of the said byproducts will be distinct advantage as the cost of their production would be practically negligible compared to the selling price of these chemicals and their demand in the country for a wide variety of uses, good returns are expected.

This is a project of combined efforts of many skilled engineers and technicians who have to play a great part for the successful implementation of the project.

We would require the generators and two boiler sets of which one set of boiler and generator can be worked. The second set be erected can a stand-by. Two sets would normally cost six crores.

The boiler, generator, switchgear and transformer equipments is the biggest investment in the whole scheme which can be made good by an exchange of our entire production of 500 tonnes caustic soda and 250 tonnes chlorine and 50 tonnes of hydrogen per day, apart from other chemicals on an export contract basis.

Hence our country by continuous process will earn foreign exchange several million dollars per annum.

The residual steam from the generator which is expected to be discharged at 300—400 lbs. pressure will be drawn for utilisation in the Evaporation Section. The burning of power gas in boilers results in discharge of nitrogen and carbon-di-oxide gas, as waste-gas. This will be drawn through a solution of couprous chloride, which will absorb carbon-di-oxide and liberate nitrogen which will be stored in holders for use in fertiliser section.

From atomic reactors scientists are dreaming that they will harness this cycle which keeps sun burning, but the main secret the Earth Magnet Generates only in the sea.

A definite relation between solar activity of the properties of water and the State of Health, the ultimate cause in oscillation of the earth magnetic field connected with solar activity, just as body and soul. When hydrogen becomes universally available it can perform all the different functions of natural gas, the said energy sources would be used to produce hydrogen which could then be distributed as a 'Non-Polluting Multipurpose Fuel' by the co-operation between the worlds, Western and Eastern energy users, wherein a special permanent corporation can be created for the said purpose, 'Scheme' can be submitted in which these two regions could harmonise their requirements out of this programme.

After a deep study for several years, the inventor and Promoter Mr. K. N. Raja Rao has visualised the most economic system of distillation and its advantages where there is plenty of heat and energy, water can be fully utilised which will be a challenging one, compared to any of the foreign plants, with a novel design method of implementing an ingenious technique *viz.*, 'Nature Magnetic Flash' (NMF) System, (Magnetic Hydro Dynamics).

Of all the various distillation methods this (NMF) techique shall be a special process, sea water will be let into the evaporators which will be connected with a series of pipes supplying sea water drawn from the sea by means of infiltration wells, with heavy duty pumps. Thereby water gets purified by eliminating other elements will be the greater advantage in the first stage. In the second stage whereby heat used to boil the said water which must be recirculated after extracting 60 per cent of the mother liquor. Water will be let into the evaporators which contain 24 chambers so that it can be used over and over again thus reducing heating costs and thereby the cost of pure water will be cheap ; Thus we can supply 40/50 million gallons of fresh water per day. This system though it is surprisingly simple and cheap will be known to the world early as (NMF) Distillation which will be more successful scientifically best known appliation to greater advantage to the welfare of humanity and our working cost will be cheapest in the world.

THE TAMIL NADU CO-OPERATIVE HOUSING SOCIETY LIMITED, NO. X-406. VEPERY, MADRAS-600 007.

"Venkataswamy Vagheesam Nilayam"

No. 14, Ritherdon Road, Vepery, MADRAS-600007.

Telegrams: "HOUSEBANK" Post Box No. 486 Telephone No. 30877, 30878

President :
THIRU PALANIVEL RAJAN, B.SC., B.L., M.L.A.,

Vice-President :
THIRU P. KASTURI PILLAI

Treasurer :
THIRU S. PALANISWAMY, M.A.,

—oOo—

Authorised Share Capital	—	Rs. 5 Crores
Paid up Share Capital	—	Rs. 2,77,30,025
Loan outstanding against Primary House Mortgage Societies and Building Societies.	—	Rs. 20,72,53,971

Long term loans for construction of new houses, additions and improvements etc., repayable in twenty years are granted to individuals through affiliated societies. Please contact nearby Primary Housing or Building Society for information.

Fixed Deposits also accepted.

(Repayable of Principal and Interest payment guaranteed by Government of Tamil Nadu.)

		MAXIMUM INDIVIDUAL LOAN
1. For Construction of new houses	—	Rs. 30,000
2. —do— (Through Rural Housing Societies)	—	Rs. 10,000

P. K. PATHMANATHAN, B.A., H.D.C.,
Joint Registrar / Secretary.

ONE WHO TUMBLES IN ALSO TUMBLES OUT OF LIFE

—*—

ADULTERATED BREW ALWAYS POSE A THREAT TO LIFE

Dr. A. L. ANNAMALAI, *Superintendent, General Hospital.*

All over the world from time immemorial indulgence in alcoholic drinks has been prevalent. Men and women consume alcohol—men more than women. Some may take alcoholic drinks every day in moderation, while a few may become dead drunk. When there is an occasion or opportunity alcoholic drinks are consumed. Liquor is also given as medicine particularly as a pick up after delivery for heart diseases, or as an appetiser. Many a time people who are depressed would take alcohol to forget their worries or to suppress their depression.

During war time, army personnel take alcoholic drinks to get over fear and fight boldly. People who commit crimes also indulge in alcohol. Alcohol in moderation though not injurious becomes a killer when one takes more alcohol or adulterated alcoholic drinks.

Prohibition has got many advantages and has been re-introduced in Tamil Nadu. Prohibition is in force in very few States in India. With lifting of prohibition many have taken to alcoholic drinks and it has become a habit. With enforcement of prohibition a majority of them have become teetotalers. But some are unable to control themselves. In the absence of official permit they resort to drinking spurious liquor manufactured under unhygienic conditions. Methylated spirit is also used, which by itself is dangerous affecting the eyes and health due to acidosis. In addition they may add with it several substances to give a kick. One who wants more kick for various reasons may take more of these adjuvants. The symptoms of Methyl Alcohol poisoning are due to breakdown products : Formaldehyde and Formic acid which are brought about by the enzyme " alcohol dehydrogenase " normally present in the body. Ethyl alcohol competes for the same enzyme for its breakdown, supressing the breakdown of Methyl alcohol.

Hence Ethyl Alcohol is used to supress the formal dehyde and formicacid from Methyl Alcohol. But this may increase the Methyl alcohol level in the body and delay its excretion. The formic acid also supresses carbohydrate metabolism producing more of lactic acid which also contributes to the severe metabolic acidosis. These lethal substances supresses respiratory centres in the brain which normally must be stimulated to compensate for the acidosis.

The symptoms may appear in 6 to 48 hours after consumption. The symptoms may be delayed when Ethyl alcohol is mixed with it or some added substances to give the kick. The symptoms in order of appearance are vomitting (94%), heaviness of head (42%), blurring of vision (47%), Diarrhoea (12%) and Hicough (12%). Other symptoms are minimal (Difficulty in speaking, walking, drowsiness etc.) Methyl alcohol poisoning occurs in our breaks, killing many. In United States of America there were outbreaks among which in 1951, 323 cases were admitted and 48 cases expired. In 1973 Methyl Alcohol poisoning occured in Palm Island in North Queensland among aborgines. There have also been outbreaks in the SCANDINAVIAN COUNTRIES. In Tamil Nadu we have had two outbreaks in 1968 and in 1971, about 113 cases were admitted in 1968 in Government Royapettah Hospital, Madras and 32 cases expired. There is also one instance in Australia where an Indian Sailor was admitted for Methyl Alcohol poisoning in 1974.

The mortality rate depends upon the quality, quantity, state of health of individual and the interval between consumption and medical aid. When symptoms are annoying or compelling, patients seek admission in hospital but supress the informations. When the eye symptoms *i.e.*, blurring or loss of vision predominate, the diagnosis becomes easy. Otherwise diagnosis may be delayed. When vomitting or hiccough is a predominating symptom diagnosis may be delayed. Patients are afraid to come to the hospital because of legal complications. In their own interest to save their life, they should give information about the time and quantity of the spurious alcoholic drink they have consumed as soon as they approach the hospital. This information can be given directly or indirectly by the patient or the relative. If the relative alerts the doctor the possibility of diagnosis becomes easy. There need not be a true confession but there should be an indication. When patients come at once doctors are aware and so diagnosis is easy. Press, Police and Radio publicity have diseminated the news quickly so that the public are aware and they advise the affected individuals to seek admission to the hospitals.

This time, the press as usual has not highlighted the number of deaths but have highlighted the facilities available in the Hospital and stressed the need for recognition and admission.

Treatment

The poisoning through its breakdown products produces severe acidosis in the body which is fatal. Hence neutralization of this acid sufficiently at an earlier time is life saving. Before admission into the hospital the suspected patients are advised to drink soda bicarbonate mixed in the sugared water in plenty. In the hospital the seriously ill patients are given intravenous soda bicarbonate under the control of repeated blood levels of bicarbonate and PH. In addition, sweatened soda bicarb solution is given to drink every hour.

Ethyl alcohol was used during the first one or two days but the improvement with it was not satisfactory. Some workers in this field have questioned the value of ethyl alcohol in the treatment . Hence Ethyl alcohol was not administered in some patients allowing the methyl alcohol to break down quickly and neutralising the products using sodium bicarb.

Isoprophyl alcohol was also isolated from some samples which though clinically akin to Methyl Alcohol, does not lead to eye afflictions.

SPOTLIGHT ON EMPLOYMENT

SITUATION IN TAMIL NADU DURING THE MONTH OF APRIL 1975

The general employment situation in Tamil Nadu during the month of April, 1975 showed an upward trend in almost all activities of Exchange operations except in some activities such as the number of vacancies notified and the number of employers who used the Employment Exchanges. The decrease in vacancy notification and the employers who used Employment Exchange is due to certain restriction on recruitment imposed by the Government of Tamil Nadu. The increase in the quantum of placements noticed during the month was due to the receipt of results of submissions on outstanding order cards. The increase in Registration is attributable to the registration of large number of teachers on completion of their training. The increase in the Live Register is due to the introduction of new renewal procedure and due to increase of Registration during the month. In terms of percentage variation placements increased by 12.6%, Registration by 9.2% and Live Register by 3.4% when compared to the previous month ; the employers who used Employment Exchanges, however decreased by 28.5% and vacancies notified by 14.2%.

II. Placements effected through the efforts of the Employment Exchanges :

1. Total No. of applicants placed in employment .. 2,871

(*a*) Out of (1) above, No. of Ex-Servicemen placed in employment .. 89

(*b*) No. of Physically Handicapped applicants placed in employment .. 34

(*c*) No. of repatriates (Burma Repatriates & Srilanka Repatriates) placed in employment .. 20

(*d*) No. of Professional and Executive Standard applicants placed in employment .. 96

III. Other Services rendered by this Department :

(*a*) No. of guidance talks delivered at Schools by Vocational Guidance Officers of the Employment Exchanges .. 6

(*b*) No. of applicants who received guidance in the matter of choosing their careers .. 9759

IV. Shortage Occupation :

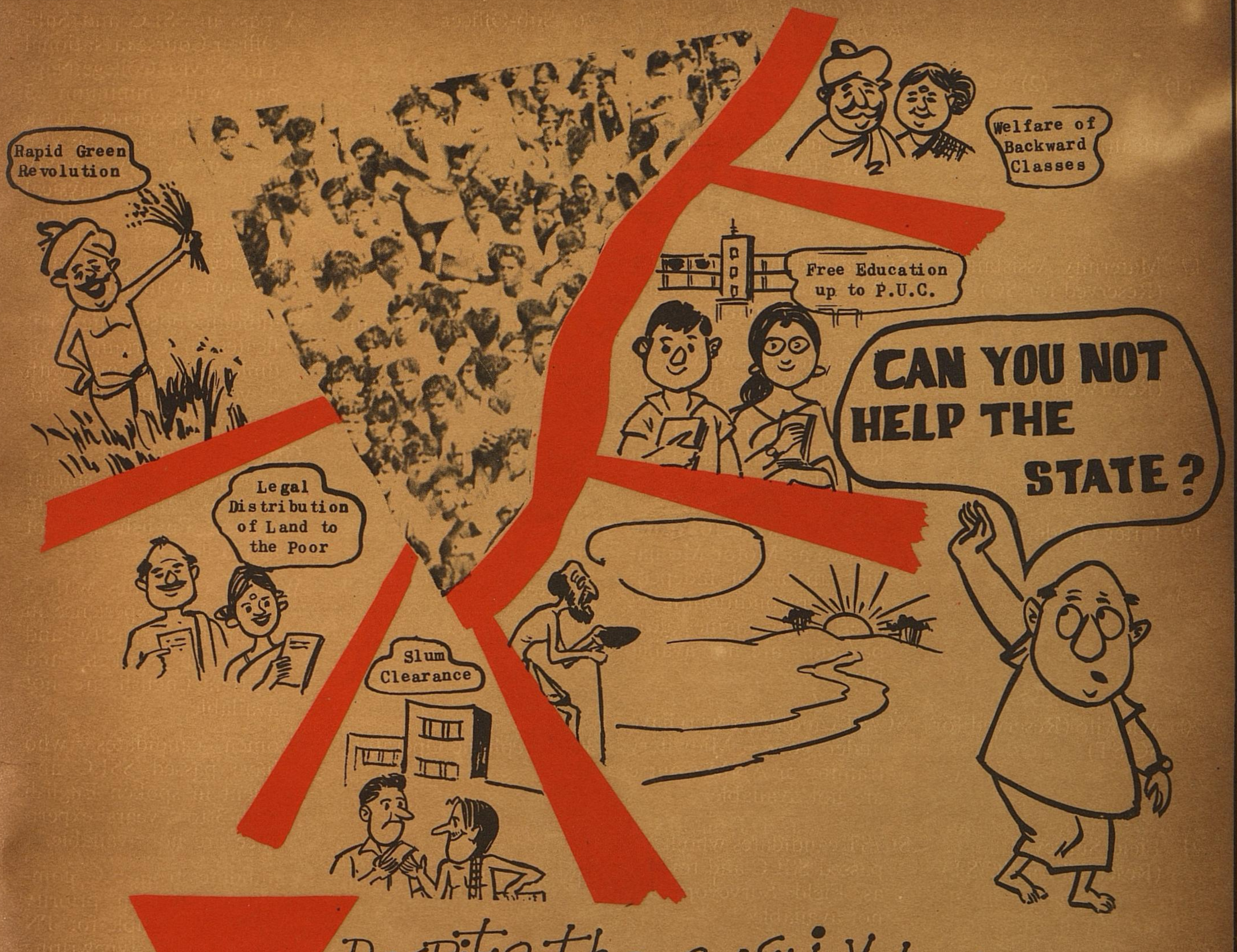
Employment Exchanges have experienced shortage of qualified personnel in respect of various occupations for which vacancies were notified to them. For some occupations shortages were felt every month by Employment Exchanges, while for some other occupations, shortages felt have been only periodic. The following are the occupations for which Employment Exchange have experienced shortage of suitably qualified personnel in the month of April, 1975. In order that the readers may benefit, full details of qualifications etc., prescribed for these occupations including informations on communal reservation are given against the occupations. This is published to help the job seekers.

DETAILS OF SHORTAGE OCCUPATION

Sl No.	Occupation reported to be in short supply	Details about the qualifications, experience etc. prescribed and reasons for the shortage as furnished by the Employment Offices
(1)	(2)	(3)
1.	Higher Grade Teacher	Unmarried women candidates are not available.
2.	Personnel Officer	Graduates with diploma in Labour Management and 10 years experience are not available.
3.	Archeological Conservation Supervisor (Reserved for SC/ST)	SC/ST degree holders in Engineering (Civil) with 5 years experience are not available.
4.	Foundry Manager	Graduates in Metallurgy with experience are not available.
5.	Associate Lecturer in Civil Engineering	Candidates with 3 years experience with requisite qualifications are not available.
6.	Lecturer in Textile Technology	Candidates with requisite qualification and experience are not available.
7.	Tractor Driver ST only	ST candidates with the following qualifications are not avialable : 1. Literate. 2. Diploma or Certificate regarding proficiency in Tractor driving and repairing thereof or experience for at least 3 years. 3. A licence from competent authority for tractor driving. 4. Age : not more than 30 years.
8.	Assistant Teacher	Women candidates with higher grade teaching certificate are not available.
9.	Higher Grade Teachers	Candidates who have passed Higher Grade training examination are not available.
10.	Higher Grade Teacher	Candidates who have passed Higher Grade training examination are not willing to take up the job in private management schools.
11.	Female Nursing Assistant (SC/ST) Female	SC/ST Female candidates who have undergone female Nursing Assistant Training Course are not available.
12.	Steno-Typist	Candidates with typewriting (English and Tamil) Higher and Shorthand English Higherand Tamil Lower are not available.
13.	Mt. Electrician (Reserved for SC)	SC candidates with a certificate of Electrician from a Government recognised ITI with a minimum of one year's experience in an automobile workshop are not available.
14.	Driller	Candidates with diploma in Mechanical Engineering and experience in the operation of drilling works for at least 3 years are not vaailable.
15.	Helper (Reserved for SC)	SC candidates who have passed V std. and experience of one year in Electric construction work are not available.

Sl. No.	*Occupation reported to be in short supply*	*Details about the qualification, experience prescribed and reasons for the shortage as furnished by the field officers*
(1)	(2)	(3)
16.	Health Visitor	Candidates with a diploma in Health Visitor'sCourse and age below 30 years are not available.
17.	Maternity Assistant (Reserved for SC)	SC candidates trained in ANM and below 30 years are not available.
18.	Health Assistant (Reserved for SC)	SC candidate swho have passed SSLC and completed the Sanitary Inspector's Course and below 30 years are not available.
19.	Fitter Grade-I	Candidates with 10 years' service as Motor Mechanic capable of independantly reconditioning & overhauling engines ,gear box etc. are not available.
20.	Midwife (Reserved for SC/ST)	SC/ST candidates who have under gone Midwifery training or ANM Course are not available.
21.	Field Surveyor (Reserved for SC/ST)	SC/ST candidates who have passed SSLC and trained as Field Surveyors are not available.
22.	Physical Education Teacher	Candidates who have passed SSLC and YMCA training in physical education with TTC are not available.
23.	Fireman Driver (ST)	V Std. passed candidates from S.T. community with heavy vehicle driving licence and 3 years' experience as driver and experience in operating contrifugal pumps are not available.
24.	Music Mistress (SC/ST)	SC/ST candidates from non-priority category with diploma in Music or Indian Music by Higher Grade qualification are not available.
25.	Signalman (SC/ST)	Candidates from SC and ST community in non-priority category with a pass in SSLC and I Class Signaller's test are not available.

Sl. No.	*Occupation.*	*Details.*
26.	Sub-Officer	A pass in SSLC and Sub-Officer Course atNational Fire Service College,Nagpur with minimum 3 year's experience in a recognised Fire Service in a supervisory capacity with required physical measurements from among SC/ST and Ex-Servicemen candidates are not available.
27.	Laboratory Assistant	Candidates possessing certificates in Ceramics or diploma in Ceramics with 2 years' experience are not available.
28.	Telephone Supervisor	Graduate with 10 years' experience in a similar capacity and fluent in spoken English are not available.
29.	Receptionist	Women Graduates with 2 to 5 years' experience in a similar capacity and fluent in spoken and written English are not available.
30.	Telephone Operator	Women candidates who have passed SSLC and fluent in spoken English with 3 to 5 years' experience are not available.
31.	Steno-Typist	Candidates from B.C. community and in priority category, eligible for TN PSC with typewriting (English and Tamil) by Higher Grade and Shorthand by Lower Grade are not available.
32.	Steno-Typist (ST/SC)	Candidates from SC/ST community with a pass in SSLC and typewriting Higher Grade and with 2 years experience as Steno Typist /Clerk are not available.
33.	Lower Division Clerk (ST)	Candidates from ST community with a pass in Matriculation or its equivalent with 30 w.p.m. speed in typewriting are not available.
34.	Supervisor	I or II Class Graduates in Economics / Statistics / Sociology / Agriculture / Animal Husbandry with knowledge of Tamil / Telugu and minimum 2 years experience are not available.



Despite these Achievements
Rising Population Raises Problems

SURELY YOU CAN

by PLANNING YOUR FAMILY

DEPARTMENT OF HEALTH SERVICES AND FAMILY PLANNING

Regd. No. M. 8676-A

VISIT Poompuhar

FOR A REAL INSIGHT INTO Tamil Culture

Kaveripoompattinam, known as Poompuhar in its more fortunate days was a well laid out port town which boasted of a separate settlement for the foreigners. Much of the archaeological remains still are there for us to see.

In addition, the recently constructed art gallery is the first attempt, after many centuries, at group-sculpture for which Tamil Nadu is justly famous. In the form of group-sculpture and also in individual figures a remarkable edifice to recreate the life and times of the Tamil classic " Silappathikaram " Story of of the Anklet has come up at Kaveripoompattinam in its art gallery.

FOR FURTHER DETAILS

CONTACT:
RECEPTION OFFICER,
Poompuhar, Art Gallery
[VIA] SIRKALI, THANJAVUR DIST.

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